FEBRUARY, 1958 2s. 3d.

Personnel Management & Methods

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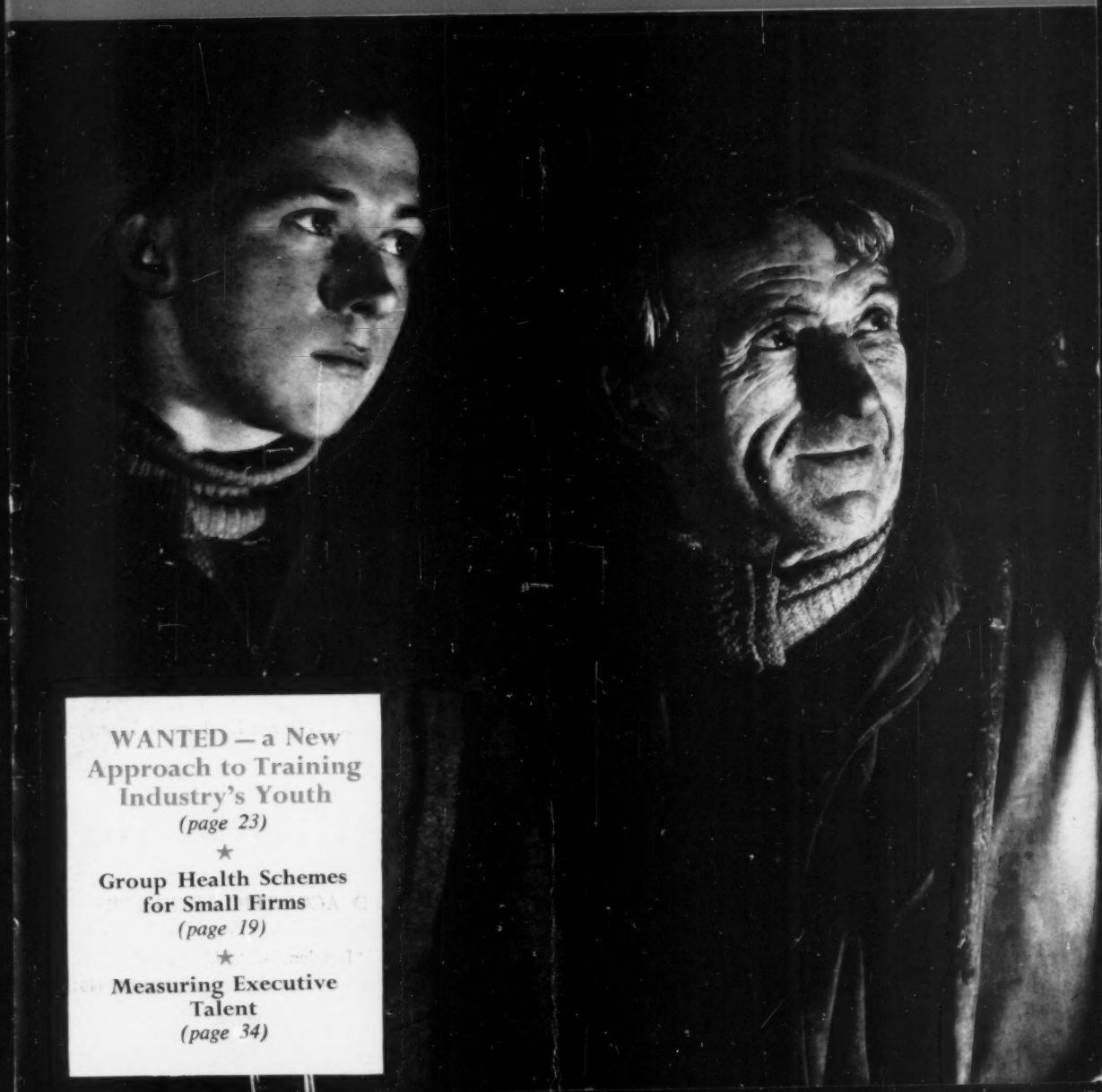

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(page 23)

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Group Health Schemes for Small Firms
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(page 34)

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Personnel Management & Methods

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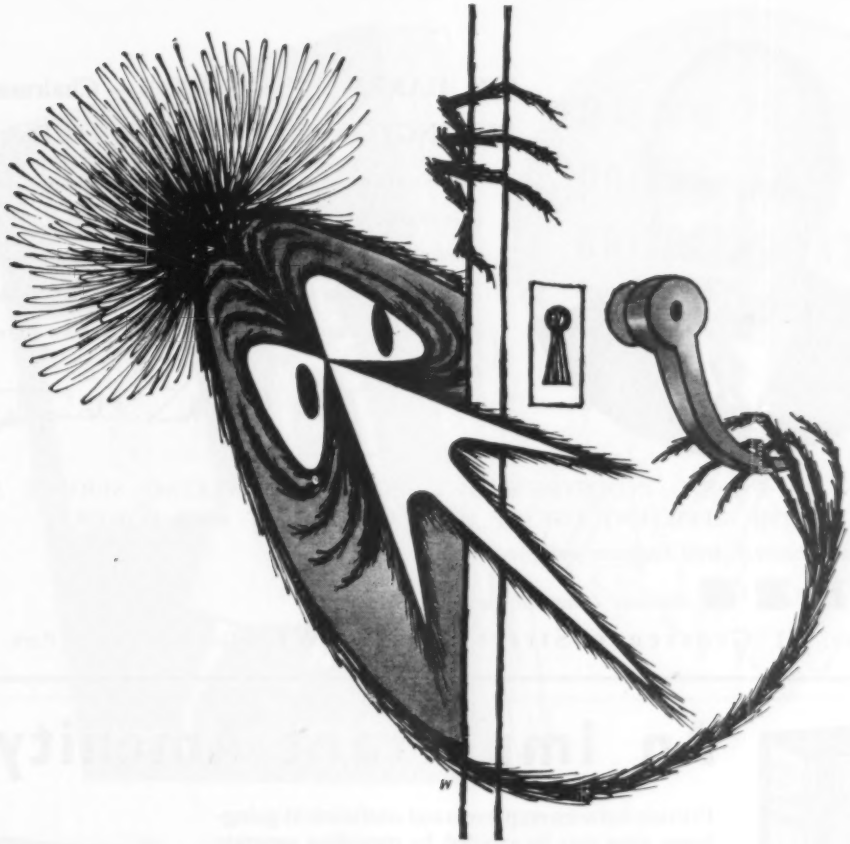

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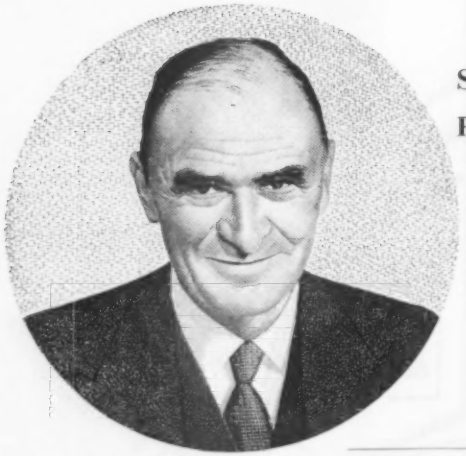

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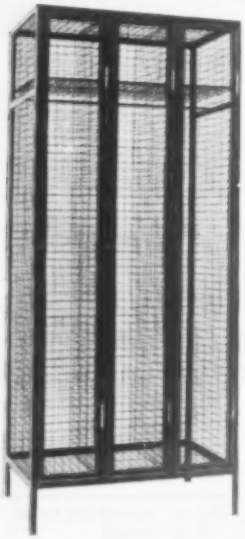

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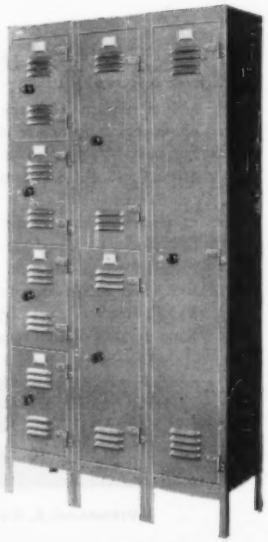

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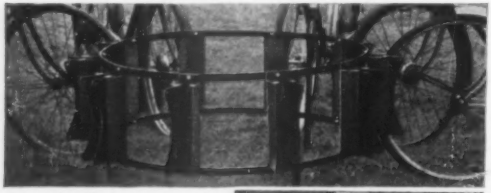

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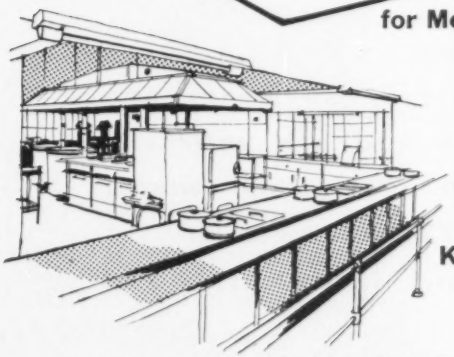

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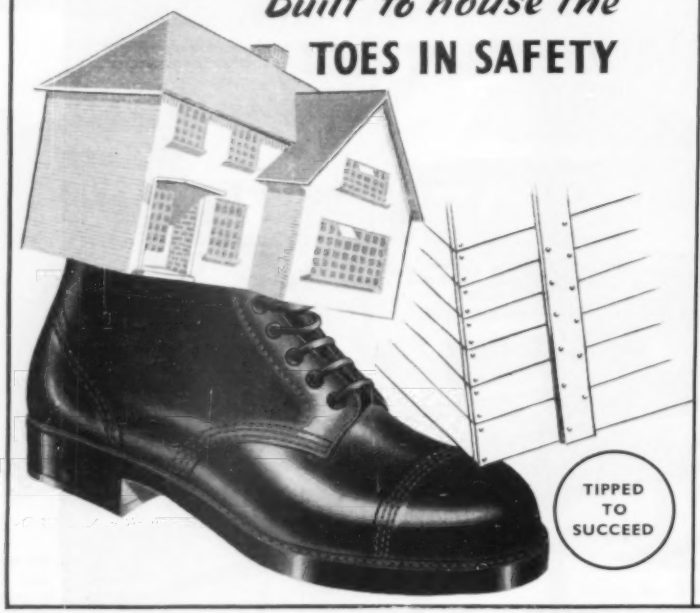

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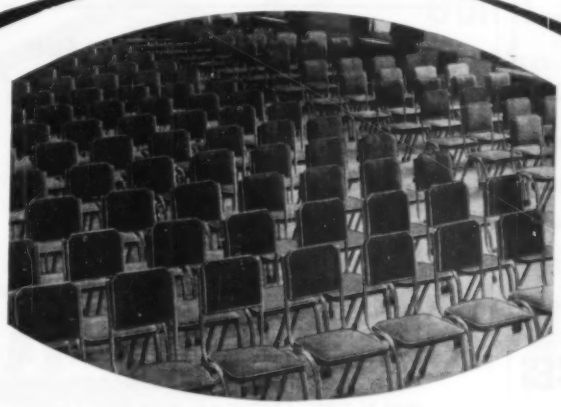

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Point Counter Point

Warfare by Other Means

A correspondent writes:—

THE personnel manager in particular, and management in general, are often unaware of the stresses and strains that are being fought out in their own production units. Although joint consultation and the like may create a superficial atmosphere of industrial harmony, the average manager is completely insulated from the bench-room politics and union manœuvres which, in eruption, cause economic dislocation.

This peculiar limbo-world of motion and amendment (which expresses itself in sudden upsurges of discontent) is often so far below the executive's ken that his solution to the problem is likely to be purely of a short-term nature. In fact, in many cases individual firms can only adopt delaying tactics within the present legal and social structure of the Welfare State. This does not imply that the business executive is incapable of understanding such issues: it is simply a matter of economic intelligence and he is often the last to know.

How many personnel managers are aware of the factory "postings" that occur within the organisation of the Communist Party? How many managers are aware of its Area Industrial Officer who moulds — if allowed — union branch policy on direct instructions from the Central Industrial Committee? Naturally such tactics are known by the astute manager, especially if he has had a trade union background, but with the growth of the professional executive, many young managers are untutored in industrial warfare — as in some cases — warfare it is.

For example. The A.I.O. wants to cause discontent in an aircraft factory in his specific region. A skilled toolmaker is "sent" from one job to another factory which is poorly "organised"; the worker has good training and experience; he is taken on. Within three months, a cell has been strengthened in the factory; grievances are played on — canteens, overtime and the like — purely, it appears, as an unrelated series of worker-management disagreements. It is not. Deliberate subversion is being activated as a facet of a national or class struggle. Furthermore, inside the struggle for power, different factions are playing off conflicting groups, from Trotskyists in Labour Party guise to moderate reformists.

The mass of trade-unionists are as unaware of these moves as the staff. In fact it is worker apathy which allows such a state of affairs to exist. Small, highly organised minorities can control mass industrial movements, as the recent E.T.U. elections have shown.

Blacklisting is not enough. Good industrial relations demand a deeper understanding of Communist activities. For them, "politics is war carried on by other means".

Mind E's and Q's

HOW is your E.Q.? The question may mean nothing to you at the moment, but it probably will in the none too distant future. For E.Q., short for "Executive Quotient", is one of the latest additions to the management glossary in the U.S.A. It seems to mean the same thing as "leadership qualities", but for some reason these days the Americans are as fond of the word "executive" as we have always been of "leadership".

Russia at Work

IN a sound broadcast a few years ago, Bertrand Russell pointed out that, despite their surface hostilities, the civilisations in the U.S.A. and the U.S.S.R. had fundamentally much in common. They were, he said, both young civilisations which both believed in man's ability to control Nature and force it to his will, a point in which they differed from more mature and more fatalistic civilisations.

More grist to this mill was contained

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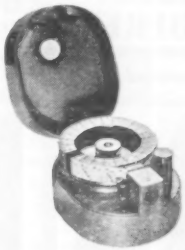

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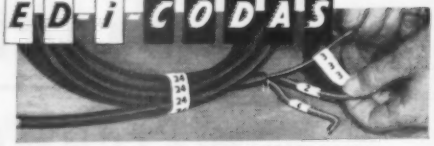

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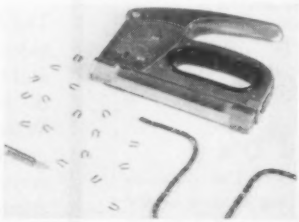

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Point Counter Point

in a fascinating talk by Dr. James Taylor, M.B.E., a director of I.C.I., on a recent visit to Russia. Dr. Taylor stressed that, like America, the U.S.S.R. was largely a classless society but there was no question of people being equal from an economic standpoint. There was ample incentive for people to improve their standard of living; the average wage of an unskilled worker, for example, was 600 roubles a month whereas a well qualified technical or scientific worker could earn as much as 30,000 roubles a month. Where, in Britain, can even a brilliant scientist earn 50 times as much as an unskilled labourer?) The incentive became all the greater when it was borne in mind that the maximum rate of income tax in Russia was 13 per cent.

Other points he mentioned were that the State took half the firms' profits but paid for all major expenditure on plant and buildings, that products had no high finish as in a competitive economy, that all management worked on the shop floor either before or after training, and that the technical management class as in Britain was becoming more influential.

There were no "frills" for the workers though evidently there was some kind of productivity bonus which in some cases, it was claimed, the workers had decided to spend on better machines so as to increase the amount of bonus in the following year.

Russian workers were very interested in knowing who owned British factories and a lot of their ideas on this matter, said Dr. Taylor, were antediluvian: for example, the manager exploiting the workpeople for his own advantage. This raises the interesting speculation on what, if any, is the official Soviet line on personnel managers in Western countries. Are we, for example, sinister background figures or merely misguided lackeys of a corrupt bourgeois oligarchy?

Some Facts About Stress

EXPERIMENTS on the effect of "stress" on workers are described in an article by Dr. D. C. Fraser, formerly of the Institute of Aviation Medicine, in the current issue of *Occupational Psychology*. He defines stress as anything which in relatively extreme form tends to disrupt normal functioning, such as heat, humidity, noise and great physical effort.

"No, Doolittle, we don't fire people here. We're just extending your coffee break indefinitely". (Personnel Management Abstracts, U.S.A.)

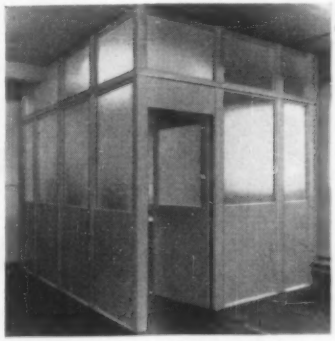
The effects of stress are smaller on skilled workers than on unskilled. After a time, stress causes a deterioration in performance which shows as increased variability. But the more complete, precise and immediate the worker's knowledge of the results of his actions, the less is the effect of the stress. Subjects who had to hold figures in their memory found this harder in noisy conditions. One discovery reported by Dr. Fraser was that the effect of trying to work in noise was still felt by the workers when they were tested in quiet conditions. This "carryover" effect lasted 24 hours. Similar results were found in tests with heat.

Experiments also showed that, the higher the temperature, the more a normally vigilant worker is likely to miss one among a number of signals. "It is not perhaps too fanciful", writes Dr. Fraser, "to recall cases where a highly experienced man has missed a familiar signal right under his nose. For example, there is the case of the experienced engine driver whose failure to perceive a warning signal caused a serious accident although the evidence showed him to have been keeping the normal look-out". The dangerous range of temperatures seems to be from 85 degrees upwards. After 20 minutes at 100 degrees, some 12½ per cent of signals are missed. Reaction to signals was found to be as quick as usual, however, except under conditions of hard physical work in high humidity. The older the worker, the longer seemed to be the after-effects.

Lunatic List

THE following prescription for up-and-coming executives recently appeared in the American magazine *Factory Management and Maintenance*. It was dreamed up by a "student of the history and art of leadership".

1. Lead by training others.
2. Never stop learning how.
3. Master the simple first.
4. Look for leadership in others.
5. Cultivate right climate.
6. Be faithful to principle.
7. Be buoyant.
8. Be a good follower.
9. Learn to like people.
10. Be yourself all the time.
11. Earn respect.
12. Inspire others.
13. Be exciting and enthusiastic.
14. Be confident.
15. Match people to the job.
16. Expect the best of people.
17. Keep your poise.
18. Be active.
19. Be humble—but not too humble.
20. Be consistent.
21. Be gracious.
22. Know your organisation.
23. Be an attentive listener.



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Point Counter Point

24. Follow the chain of command.
25. Learn from others.
26. Be co-operative in seeking answers.
27. Be interested.
28. Don't show off authority.
29. Be thoughtful.
30. Criticise constructively.
31. Delegate authority.
32. Admit your own mistakes.
33. Be firm but fair to everybody.
34. Plan programs in advance.
35. Study the great leaders.
36. Be affirmative and creative.
37. Give credit.
38. Praise your people publicly.
39. Reprove tactfully.
40. Rate fairly—find a yardstick.
41. Keep people informed.
42. Respect the work of others.
43. Give reasons.
44. Talk directly, briskly.
45. Compromise, don't appease.
46. Be good to yourself.
47. Be brave, not brash.
48. Cultivate a sense of humour.
49. Be dynamic; and
50. Cultivate moral fibre.

The fascinating thing about all this is that, taken individually, each point is either ethically desirable or constitutes sound common sense, or both. Taken collectively, the whole thing is rubbish and irritating rubbish at that. Whoever the writer is prescribing for, it is not for human beings, and the same can be said of lots of management literature; its lunatic fringe is far too wide.

"B" For Benevolence

"THE State will learn nothing if there is no voluntary action to teach it," declared Lord Beveridge last month at a Press conference held to publicise the new "B" scheme launched by the Hospital Saturday Fund, "and this new venture is an outstanding example of voluntary action."

Details of the scheme were published in our December issue (page 20), but it should be stressed here that payments are made whether members pay for treatment or not, or if members happen to be abroad or even, in the case of members injured at work, if compensation is paid from other sources. Nor do any payments made by the Fund affect Public Assistance grants.

So far 60,000 people have made inquiries about the Fund's new "B" scheme, and an initial 25,000 to 30,000 are expected to join it. Cost of contributions ranges between £3 and £4 a year.

A Long, Dour Struggle

MAKING what was "positively his last appearance" as Chief Inspector of Factories (he retired on December 31), Sir George Barnett relinquished his back seat of retirement for an hour last month, took a harder official seat in the Ministry of Labour's conference room, and presented his Annual Report for 1956.* What he had to say was reassuring but by no means complacent.

The number of fatal accidents in industry during the year—687—was the lowest total since 1933, while a total of 184,098 reportable non-fatal accidents showed a reduction for the first time in four years. The index of the accident rate, based on a figure of 100 for 1950, was 87.1, the lowest figure yet recorded, and the fall was accelerating.

But, although accidents were taking a long-awaited tumble, it owed more to changes in production methods than to actual progress in accident prevention. As an example, Sir George cited the accidents caused by handling goods and materials. There had been a slight improvement during the year but appreciably little—despite the increased use of mechanical handling equipment.

Industry, he emphasised, needed to cultivate a higher sense of safety consciousness. It must step up its safety training programmes at every management level, especially where the safe working of young people was concerned—one of industry's "major problems". The fatal accident rate had fallen chiefly because there were less men involved in such accidents. *But the average numbers of boys, girls and even women killed on the job every year had changed very little in the last five years.*

With his term of office just begun, the new Chief Inspector, Mr. T. W. McCullough, gave us a preview of the future. To conquer that all-too-prevalent attitude of "it can't happen to me", he hoped for closer collaboration in accident prevention between the trade unions and employers. There was already official co-operation between the T.U.C. and employers' federations; it must now be fostered at workshop level where it was so urgently needed.

That was the official view. And what of our individual prospects for 1958? Industry is in an unenviable position: it misses that clean sensation of starting afresh, for it is always one year ahead of official time. There are still a whole year's skeletons left in the cupboard until the next report for 1957.

One firm, at least, starts the new year without an anxious glance over its shoulder. Alfred Bird & Sons Ltd., Birmingham, have gone a whole year without losing a single working shift and their celebration has been well earned (see page 37). The rest of us must simply let the past take care of itself and apply our energies to some of that "general rethinking on the safety problem" for which the Chief Inspector called. Then, on some bright morning in January, 1960, we shall know exactly what we achieved in 1958, and how we lived up to our best intentions.

THE EDITOR.

*Annual Report of the Chief Inspector of Factories, 1956. H.M.S.O. 9s. 6d.

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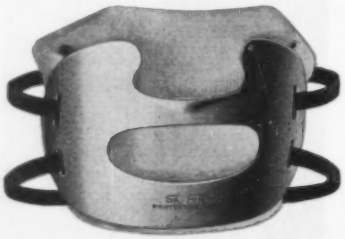

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How Industry Can Build up its own Health Service

Slough and Harlow Proving that Group Schemes are obvious Answer to Medical Problems of Small Firm

By THE EDITOR

THE exact number of working days lost to industry and commerce in any one year as a result of illness will probably never be compiled—and there would be little point in making the attempt. It is enough to know that the figure is many times the total loss caused by strikes and accidents combined and that much of this loss could be drastically cut were industry really to apply itself to the problem.

Statistics, however, even though some regard them as the most pernicious form of lie, can be very impressive. And some figures unearthed in the course of a Factory Inspectorate survey carried out in November, 1955 not only point to the extent of industry's apathy to health matters but make salutary reading in a country which now prides itself on its National Health Service.

The survey in question dealt with the extent to which factories employing 50 or more persons had medical and nursing services. Altogether 21,693 such establishments were covered and of these only 421 employed a qualified doctor whole-time. A further 4,198 employed a medical practitioner on some kind of part-time basis but the remaining 17,080 had no arrangements of this kind whatever. The number of factories employing trained nurses, whole- or part-time, was 5,079, while the number employing persons with nursing training, was 4,432. The number of factories covered was, repeat, 21,693 and, of course, a large proportion of the

Farnham Park Rehabilitation Centre. When the Slough Service first started it concentrated on providing a medical treatment service, but today rehabilitation work and occupational hygiene form two very important parts of its work. Co-operation here with the Ministry of Labour is characterised by the welcome absence of red tape.

figures for doctors and nurses apply to the same factories.

"As one might expect," ran the official comment, "the most comprehensive schemes of medical supervision are to be found in the larger factories, particularly in those having some special health hazards."

The main problem, then, centres round the small firm and here, where even the cost of a nurse is often regarded as too high, the task of providing adequate medical supervision is much more difficult than it sounds. Apart from direct costs, moreover, there is the rooted attitude which accepts a certain rate of sickness absenteeism as an inescapable burden of any business. While this is undeniable, it is equally true that efficient medical attention can reduce the weight of the burden.

The obvious answer to the medical problem of the small firm is the group scheme. Admitted, the cost of setting up and administering a group scheme is high, but once established the benefits and efficiency of such schemes become so obvious that the wonder is there are still only about half-a-dozen of them operating in Britain. In this article we are going to deal with the two most successful—namely, the industrial health services at Slough and Harlow.

The plight of the small firm which cannot afford a full medical service for its employees was mentioned last month by the Chief Inspector of Factories when he called for greater communal efforts to establish joint industrial health services. This article describes two such schemes which are doing much to overcome this problem.

SLOUGH

THE Slough Industrial Health Service is the doyen of such schemes. It was started over ten years ago with the object of guarding the health and promoting the welfare of the workers concerned, but its sponsors also hoped—and, as events have turned out, not in vain—that it would serve as a model for similar services in other parts of the country.

The initial cost was met by a grant from the Nuffield Foundation but running costs are mostly met by a charge on member firms of 21s. a year for each employee. At the time of writing, 180 firms with 17,750 employees are members of the Service out of an area of some 300 firms, 200 of which are sited on a modern trading estate. The Service also gets financial help in the form of grants from the sponsors and private donors and by a payment from the Ministry of Health for work done on behalf of the National Health Service. Local industry, too, has turned up trumps and in the last three years has subscribed over £50,000 to provide a new central clinic and other equipment. As an example of community co-operation, there is the firm which gave one of its own products—a modern control panel to regulate the heating of all departments in the new clinic.

The Service is registered as a non-profit-making limited company and is administered by a Council of Management. Not unnaturally, quite a number of interests are represented on this Council, as follows: Representatives of local managements, the local trades council, the Ministry of Health, the Nuffield Foundation, the Ministry of Labour, and the University of London.

The structure of the Service has altered little since it began. It consists of a central polyclinic which includes the Medical Director's office and occupational hygiene research laboratories, two dressing stations situated to cater for firms a fair distance away from the central clinic, and a mobile dressing station. In addition, medical departments in six of the larger member firms do work on behalf of the Service. Last, but not least, is the Service's Rehabilitation Centre at Farnham Park, about which more later.

A feature of the Service has been the steady attempt to integrate its work with that of the general health services of the community. This was a point which the sponsors suggested should be given special attention, and, for its part, the central clinic shares its X-ray, physiotherapy and chiropody facilities with one of the local hospitals. Out-patient clinics for this hospital are also held in the same building as the central clinic. This, and the fact that certain members of the staffs of local hospitals are attached to the Service, has ensured a close association, and a noticeable development has been the keen interest shown by local medical men in the treatment of industrial injuries and diseases.

Besides a complement of four full-time medical officers, the Service has a nursing staff of about 30, of whom 14 are employed in the medical departments of member firms. The medical officers, headed by the Director, Dr. A. Austin Eagger, do over 3,000 medical examinations each year in addition to their other, more specialised duties for the Service. The majority of these examinations are undertaken to assess physical fitness for a particular job, but a growing number of workers and executives are submitting to routine check-ups.

As time goes on, the Slough Industrial Health Service is getting bigger

The hydrotherapy pool at Farnham Park continues to be a popular and valuable method of treatment for a wide variety of cases. There is also a remedial gymnastic staff who organise recreation and entertainment.

A mobile dressing station, or a clinic on wheels. In the background is the Slough Industrial Health Service headquarters.

and bigger and its functions more diverse, but before discussing these, mention should be made of one feature which has proved invaluable. This is the mobile dressing station, and, as its name implies, it is a fully-equipped clinic on wheels which makes it possible to re-dress wounds and carry out medical examinations at the factory itself. In this way, during the past 10 years, the mobile dressing station has saved over 3,000 man-hours a month.

In the initial stage of building up the Service, the main effort was naturally concentrated on the provision of an emergency casualty service and modern facilities for medical examination. Now, three very important branches are the Occupational Hygiene Team, the Social Service Department, and the Rehabilitation Centre at Farnham Park.

The Occupational Hygiene Team was established in 1950 in conjunction with the London School of Hygiene and Tropical Medicine to give effective and immediate help to industry in the investigation and control of any condition in the occupational environment which could affect the health, safety and well-being of workers. The school provided laboratory accommodation and equipment and a paid a proportion of the team's salaries. Now, the team is entirely sponsored by the Service and has its headquarters at Slough, in the central clinic, where well-equipped laboratories have been provided.

More specifically, the work of the team entails investigating hazards to health reported by managements, workers' representatives, or by the medical and nursing staffs of the Service, and most of the work to date has been on problems caused by dusts, fumes, gases, vapours, or faulty ventilation, heating and lighting. The experience of the team, which consists of a doctor and an occupational hygiene engineer, has confirmed that much ill-health can often be traced to occupational causes.

The following case history exemplifies the type of work carried out by the team. At the request of one management, an investigation was conducted in a non-ferrous foundry to find out the cause of upper respiratory symptoms being complained of by the employees. It was thought that sulphur dioxide might be a cause, a theory which seemed to be substantiated by the result of preliminary inquiries which indicated that the oil used as fuel for the furnaces had a high sulphur content. After intensive air sampling, sulphur dioxide was, in fact, discovered in concentrations below the maximum permissible limit, but at levels which could be of nuisance value. The firm was advised to use fuel of lower sulphur content and to install modern exhaust ventilation over the furnaces.

The Social Service Department was set up in 1951 under a trained medico-social worker to help with the many personal problems which affect workers in industry, and which, of course, can lower the morale of the individual and working group. The department now deals with more than 1,000 cases each year. Workers are referred by the medical and nursing staff and by managements, but many now seek help on their own initiative. The department also co-operates with the Ministry of Labour in placing and follow-up of disabled workers, particularly after discharge from the Rehabilitation Centre.

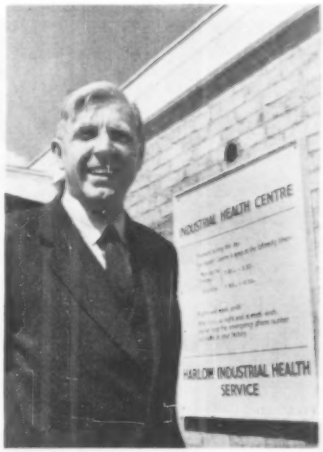
More than 5,000 patients have now been treated at the Rehabilitation Centre, Farnham Park, and of these nearly 70 per cent have been able to resume their old jobs after discharge. It has accommodation for 66 in-patients and up to 30 out-patients, and in any one year deals with more than 600 cases.

Treatment consists of work of therapeutic value, with group remedial exercises and various recreational activities. A number of cases need physiotherapy, and a well-equipped therapeutic pool ensures the proper facilities for hydrotherapy.

Forty per cent of admissions to Farnham Park are from hospitals or firms in the immediate area, the remainder coming from other districts, but chiefly from the London teaching hospitals. Through the co-operation of the Ministry of Labour, people with permanent disability can be referred to the local Government Training Centre while they are still resident in Farnham Park. A weekly conference is held between members of the staff of both centres, and decisions taken whether to recommend re-training or direct placement, and this method of assessing the disabled man "on the job" has proved very successful.

But, as Dr. Eagger points out, we still get back to the cold fact that "success in resettlement does in the end depend on gaining the support and interest of management . . . It is gratifying to be able to report that we have been able to obtain this from our member firms".

These, then, are the main measures by which Slough has brought the idea



Director of the Harlow scheme, Dr. Stephen Taylor, believes that the G.P. is the ideal man for an industrial health service in a new town.
(Picture courtesy of "John Bull")

of an industrial health service from the pioneer stage to a thriving reality. It has cost a lot, admittedly, but cost is not an insuperable barrier if the will and the initiative is there. Most important, perhaps, is that the Slough venture has encouraged other areas to follow, and a description of one such—Harlow new town, in Essex—forms the next part of this article.

HARLOW

Like the Slough scheme, the Harlow Industrial Health Service is technically a charity, being a non-profit-making organisation to meet the needs of the people who work in the Industrial Estate area of the new town. It has borrowed many of its ideas from Slough —and is frankly grateful for what it has learned from that pioneer project —but it differs radically in that it has no full-time staff of qualified medical practitioners. The director himself, Dr. Stephen Taylor, formerly Labour Member of Parliament for Barnet, works on a part-time basis, as do the rest of the doctors attached to the Service, who are local G.P.s who give their services on a rota system.

Again, as in Slough, the Service was brought into being through the efforts of the local employers, coupled with the practical support of the Nuffield Trust. And once more, such is our island love of things representational, a wide-chosen Council of Management is responsible for the administration. Similarly, the running costs come largely from a charge levied on each member firm of £2 a year per employee for those without a works nurse, and £1 a year for those with one. Other staff details are as follows: Two full-time and one part-time sister, one half-time secretary-administrator, and one full-time receptionist.

The Harlow scheme started with a membership of 13 firms in November, 1955, and now has 31 firms, more than two-thirds of the total in the area, employing 5,000 people. Its running costs are about £12,000 a year and at present it is concentrating on running a casualty service which does about 60 treatments a day, half at the clinic/headquarters and half in the factories proper. The sisters of the Service visit the factories daily, or as needed, and doctors are available twice a day at headquarters and are on call at any time. The largest firm in the Service has 1,000 employees and the smallest, three. And besides his duties under the rota system, each G.P. is responsible for a group of factories.

"We think the G.P. is the ideal man for this type of job", Dr. Taylor told me, "and through the experience he gains, he gets to know the difference between normal work, light work, and when to recommend no work at all. The importance of this is not always appreciated".

As a new town, Harlow is naturally doing its best to develop a sense of community among its citizens. Normally, this is a process which takes decades, but Harlow is attempting to foster this spirit at a much quicker rate through a host of organisations, societies and services. The Industrial Health Service is among the most important of these, and Dr. Taylor is very pleased with the response. Membership has doubled in the two years of its existence, but there are still some firms which have not joined. Yet *all* firms call on the Service in an emergency.

At present, the Harlow scheme does not boast an occupational hygiene team nor a rehabilitation service, though these are envisaged in the memorandum of association. At the moment, as in the case of Slough in its early days, the Service is concentrating on providing a first-rate casualty and treatment service. This, of course, must be the top priority of any such scheme, as more than half the time lost in industry is caused by trivial injuries.

CONCLUSION

Industrial health schemes such as these described have already proved so effective and valuable that it is difficult to see how their spread to other areas can be resisted indefinitely. What form such services might take in the future is difficult to foresee at present, but interest in the idea is certainly very great and is reflected in the large number of people from other parts of Britain and abroad who visit Slough and Harlow specifically to find out more about how such schemes operate.

Perhaps the industrial health service of the future will, in fact, develop along the lines suggested by Dr. Eagger himself, in a recent issue of the journal, *Rehabilitation:*—

"The Slough Service is an example of local industry, the State, and certain private donors co-operating to administer and finance an area service. I suggest that this could be done with advantage in other parts of the country, and that it is both economic and practical. It ensures the active interest of managements whose business and administrative ability can prove invaluable in the supervision of the financial aspect. The objection that firms will not unite to advance a project of this nature is not really valid, though on a national basis it would probably be necessary to have powers to compel the unenlightened. This would conform to previous social legislation. The State's responsibilities, financial and otherwise, could be limited to those which are already undertaken by the various Ministries and are covered by such acts as are concerned with the health and welfare of workers".

Like at Slough, the Harlow central clinic is decorated in contemporary style and very well equipped. Our picture shows a patient undergoing X-ray examination. (Picture courtesy of "John Bull")

About the Author

THIS is the first of a series of four articles in which JOHN WELLENS, an industrial training consultant, examines some of the basic issues in this field today. The subjects dealt with will be:—

1. Training The Young Worker.

2. Trade Unions and the Changing Educational Scene.

3. Training of Supervisors.

4. Training for Management.

Mr. Wellens does not intend to give a full account of current theory and practice in each of these spheres, though he is well qualified to do so. Instead, within the scope allowed by four articles, he proposes to deal with some of the main problems and weaknesses which are preventing our industrial training set-up from being as efficient as it could.

We hope, too, of course, that our series will stimulate some fresh thinking and action in this field.

We Must Change our Methods of Training Young People

We have many fine schemes on paper. The aim is excellent but far too often the administration is top heavy. There is much here to be learned from the Continent.

NOW, at a time when the Carr Committee is expected to release its report, is an opportune time to consider this topic. This could be done in two ways. We could debate how to improve the existing system or we could look deeper and consider whether the system itself should be changed. It is the latter aspect which will dominate my comments.

One of the main impressions I receive as I visit different companies is that the old division of jobs into skilled and semi-skilled is losing much of its meaning and we have the anomalous position of many semi-skilled jobs requiring more skill and responsibility than some of the jobs in the skilled sphere.

I recall an engineering factory where skilled work in the erection shops had been broken down to sub-assembly by the men themselves as a device for increasing earnings, to such an extent that the job had become virtually semi-skilled. The price the management pay for permitting the men to reorganise the job in this way is that they gradually become short of skilled outworkers capable of erecting a complete machine on site. On the other hand some of the jobs of process control and operating large batteries of automatic plant, particularly of the automatic transfer type, though officially regarded as semi-skilled in most cases, can require a great deal of experience and knowledge of the process.

The division of jobs into skilled and semi-skilled becomes very artificial where the two overlap. Rather is there a range of manual jobs with the highly skilled at one end and the unskilled at the other. As automation becomes

Actual instruction is usually of a very high standard. Too many apprenticeship schemes, however, have a top-heavy administration.

more of a reality so will this blurring of the division between skilled and semi-skilled become more apparent. But in training we assume that jobs can be classified as skilled or otherwise. For skilled work an apprenticeship of five years applies: this condition does not apply to other work.

Now, apprenticeship means two things. To the union it means "serving one's time to a trade" (where the time spent is the critical factor): to the employer it means a period of training. There is an obligation on the part of the employer to provide for the apprentice's training. But because there is no time-serving to most semi-skilled work and therefore no formal apprenticeship, the idea of training for semi-skilled jobs has gone by the board too.

This is quite wrong. Only 35 per cent of 15 years old school leavers enter apprenticeship as against 55 per cent who enter semi-skilled and unskilled work. In my view, one of our biggest requirements is to provide better training facilities for boys on semi-skilled work. An essential preliminary to this is for us to gain a better understanding of the flux taking place between skilled and semi-skilled work.

In considering this problem we ought to think of jobs ranging in a continuous pattern from the highly skilled (tool room workers, cabinet makers and jig borers) to the jobs low in skill (lorry driver's mate). We should get away from the idea of jobs in three boxes, skilled, semi-skilled and unskilled. We could then appreciate the fact that different periods were required to learn each job. In the United States, where different periods apply to each trade a boy can become a barber in two years, a bricklayer in three and a moulder in four. This is a much more realistic approach and we should consider whether to apply the principle here.

These may be controversial matters. What is less controversial is that in most so-called training schemes there is much administration and precious little instruction. Arrangements are made for moving boys from shop to shop in planned rotation. The complexity reached in some of the movement schedules and the actual mechanism for moving and reporting have to be seen to be believed.

This complexity contrasts sharply with the casual way in which the so-called training is carried out in the actual shop to which this nickel plated organisational mechanism has moved the boy. This is because managers, understanding organisation better than training principles, imagine that good organisation can cover up weak training. It can't.

I see very few boys actually receiving instruction. Curiously enough, those one sees receiving the best instruction are in the training workshops in such industries as engineering and the majority of these receive this training before the commencement of apprenticeship at the age of 16. One of the outstanding features of the training workshop system is that it uses to such good purpose the pre-apprenticeship year of 15-16. Observe the great inconsistency here. **Union die-hards say five years is necessary for apprenticeship yet during most of this period actual instruction occupies a mere fraction of the available time.**

Too Old at 17

Another great blot on our system is that boys are too old for most craft apprenticeships at the age of 17. Yet these boys have before them nearly half-a-century of active working life. Others have laboured this point, I shall be content to mention it once again.

But for an unsatisfactory situation the present wastage on Day Release and other technical college courses scoops the pool. We do not know the actual extent of this wastage because the figures are not available; they are not even collected on a national scale. Instead we have inspired estimates. A Chief Education Officer of a county area gives wastage on certain O.N.C. and H.N.C. courses as "approaching 90 per cent". The White Paper on Technical Education, which devoted only four paragraphs to this phenomenon, conceded a wastage rate of 25 per cent, but this estimate is far too low. A more recent investigation (not on a national scale) suggested that 70 per cent failed to get through even to the intermediate level of the City and Guilds examination.

The term "wastage" means "the rate of failure to pass the examination". I am equally concerned about the wastage in the lay use of the word, indicating waste of resources. What does this wastage cost us, as a nation, each year? We are short of teachers and buildings for instructing those within the compulsory school attendance range. Our ability to produce more scientists and technologists is circumscribed by lack of teachers. Yet we can use teachers and facilities so prodigally teaching industrial apprentices in technical col-

. . . In most so-called training schemes there is much administration and there is little instruction . . . the complexity reached in some of the movement schedules and the actual mechanism for moving and reporting have to be seen to be believed.

leges. What is the answer? Let us hope that the Carr Committee has something constructive to say on this point.

The French Example

We might with profit examine the system in vogue on the Continent, where apprentice training has changed with the times. Taking France as an example, we can compare our system, materially unaltered since Elizabethan times, with a modern approach developed since the war. One distinguishing feature is that the training is carried out in special centres (centres d'apprentissage) which are part school and part works. Responsible for the centres are committees representing equally employers, trade unions and the government. Training periods are usually three years, and almost invariably the progress of the apprentice is measured by examinations and on the basis of success in the final examination a certificate is issued which confers skilled status on the recipient and entitles him to the pay agreed in that trade.

In our country we have no proficiency test to practise a skilled trade: to have served one's time is sufficient. The good and the bad are on equal terms, and in my own experience I have never come across the case of a boy being refused skilled status at the end of apprenticeship because of inadequate skill. To say that every boy embarking on apprenticeship becomes adequate to enjoy skilled status, especially when the nature of most industrial training is taken into account, confers no dignity on skilled status.

There are many features I like about the French system. I like the idea of a certificate of aptitude by employer, union and government. I do not know how many apprentices in this country get a document to establish the fact that they have completed apprenticeship, but I estimate it to be less than one-third. But, above all, I like the centres d'apprentissage themselves, where the juveniles learn their trade by full-time practice and theoretical study. I feel that such a system confers that dignity and prestige on the skilled craftsman which he is rapidly losing here.

This system raises big issues, not least of which is the part to be played by the Government, which has had little direct responsibility in the past. It will be interesting to see whether the Carr Report will propose a change. If we compare the effectiveness of the centres d'apprentissage with the wastefulness of our part-time classes in technical colleges, we shall not be flattered by the comparison. True, one is full-time study and the other part-time, but this may mean that we should follow a different policy in our technical colleges. **Might it not be possible to adapt some of our local technical colleges as centres d'apprentissage, at least for an experimental period?**

I hope that we consider very carefully the Continental system. If it is not adopted as a complete system, a partial acceptance of the principle to cover small firms would do some good. It is amazing how many small firms train no apprentices at all. In one of the recent investigations, half of the firms with less than one hundred employees had no apprentices on roll. When we appreciate that firms in this category employ about one-fifth of the total number employed in this country, we get an insight into the position where apprentice training is being left to the bigger firms.

We hear a lot of talk about relaxing the proportion of apprentices to skilled men, both from the point of view of absorbing the boys of the "bulge" and also of producing more skilled craftsmen, who are urgently needed in some trades. Elsewhere, I have explained why I think this is an impracticable suggestion, but to have large numbers of firms with no apprentices at all means that all the apprentice places at present available are not filled. A modification of the Continental system would be instrumental in taking up this slack. If small firms cannot afford to engage in such a scheme, the Government might feel moved to offer some financial concession to small firms supporting apprentices.

So much for major issues: one could go on at length. When are we going to make adequate provisions for girls to play their full part in industry? Why is the student apprenticeship principle not more widely applied? When will we learn that putting apprentices on piece-rates and bonus militates against training? And when will something be done to raise the standard of commercial and clerical training? And so it could go on.

Is apprenticeship the great unchangeable of British industry? It may prove to be so. I have, in my library, a dozen separate studies of apprenticeship, all published since the war. One, the book, "Recruitment to Skilled Trades", was published a few weeks ago. Another, the Carr Report, is due for publication any moment now. There have been reports by the Government and there have been studies by private grounds such as P.E.P. No shortage of reports! It have added to the number myself several times.

What is the outstanding fact to be gleaned from this accumulation of words? It is this, that in the main we all agree.

Let us hope that the Carr Report will mark a new stage in the history of apprenticeship, so that with boldness and resolution some of the present anomalies and some of the outworn principles and practices may be swept away.

(to be continued)

Training facilities, like those at the chief civil engineers' department, King's Cross, are often excellent. It is up to industry to make the most of them.

MoL Hunts Jobs for Ex-Servicemen

THE resettlement of ex-servicemen in civil employment has always been something of a problem, particularly where ex-officers were concerned. (Other ranks have so far had no difficulty in finding jobs.) In the next four years, as the Government's defence cuts take effect and more than 300,000 men are retired from the services, the problem is bound to grow more acute. To meet it squarely the Minister of Labour has decided to establish a nationwide resettlement organisation which will be geared to deal with the first wave of ex-regulars expected later this year.

Acting upon the advice of the Resettlement Advisory Board, he is setting up resettlement committees in Scotland, Wales and the nine administrative regions of England. These will be based on the eleven MoL control offices in Edinburgh, Cardiff, Leeds, Cambridge, London, Birmingham, Newcastle-upon-Tyne, Nottingham, Manchester, Reading and Bristol. The committees, like the Advisory Board, will include representatives of industry, commerce and the trade unions, and they will work in association with the Ministry, service departments and the main organisations concerned with ex-regular employment.

Their direct contacts with industry and commerce will help the committees to advise on all problems that are likely to arise, and to stimulate interest among employers in the unique opportunities for recruitment which the scheme presents. They will also provide selection boards to consider candidates for business training courses.

Until now the resettlement of ex-officers has been largely the task of the Professional and Executive Register. This service, which was set up at about 50 of the larger MoL exchanges throughout the country when the Appointment Offices were closed down last April, also deals with general vacancies for professional, administrative and senior executive posts in commerce and industry. The City of London office, formerly at 1-6 Tavistock Square, has now moved to the main exchange premises at Atlantic House, Farringdon Street, E.C.4 (City 5020).

Pensions Survey

A SURVEY on pension schemes operating in the engineering industry has been conducted by the National Engineering Advisory Committee of the Association of Scientific Workers, the scientists' trade union. It covers schemes used in most of the big heavy and light engineering and electronic engineering firms throughout the country.

Striking a sharply topical note, the report shows the committee strongly in favour of "final salary" pension schemes as opposed to those based upon the worker's average salary. "It is possible," they state, "to arrange for pensions to be calculated by reference to the employee's salary rate at retirement or to the average over the final years before retirement, and under such a scheme the employee is to some extent protected against inflation occurring during his service."

The Association has already decided at its annual council to urge the extension of transferable pension rights for all its members, not only in the public services, where the practice is common, but in industry where it is rarely found.

Trevelyan Scholarships

OXFORD and Cambridge Universities are soon to receive students financed by a completely new type of industrial scholarship. Because they believe that there are boys capable of very great contribution to the community, but those capabilities cannot find full expression under the established examination system, a group of companies have, after wide consultation with representatives of the universities and of public and grammar schools, agreed to provide the financial support.

The scholarships will be known as "Trevelyan Scholarships" after the social historian, Dr. G. M. Trevelyan, O.M., who has shown great interest in the scheme. They will be open to boys of British nationality receiving full-time education in schools in the United Kingdom, subject to admission to a college at either university. Twelve or 14 scholarships will be offered during the first five years of the scheme. They will be worth £450 a year for three years, extended to four years in exceptional circumstances, and will not depend on parents' income.

The first selections will be made in November this year and the selectors will look for evidence that the candidate can profit fully from an honours course, and that he has undertaken some exacting task or project—either purely intellectual, or involving personal observation and travel. They will require a written account of this together with a report on the boy from his headmaster.

Education on Show

AN area of 5,000 square feet on the ground floor at Olympia, London, will be devoted to a special feature on "Education in Industry" when the National Education and Careers Exhibition is held there in May next year. Cost to exhibitors for space in this feature will be 25s. per square foot. Allocation of sites will begin on April 1, 1958. Apart from this area and sites in the Careers section no space will be sold to exhibitors.

The exhibition, which is not intended as a profit-making venture is being organised by the National Union of Teachers with the co-operation of the Ministry of Education, Ministry of Labour, local education authorities and

EMPTY SHOES PREACH SAFETY MESSAGE

No one would want to be in these shoes. The 100 pairs shown represent the total of men and women killed at work last October — another British Safety Council device to bring home the industrial safety message.

other bodies concerned with the subject. On the careers side an advisory party has been set up with representatives of FBI, British Employers' Confederation, TUC, Central Youth Employment Executive and the Youth Employment Officers' Association.

The exhibition will last from May 25 to June 4, 1959, and an attendance of over 100,000 is expected as well as wide press, radio and television coverage. Opportunities to exhibit are listed in a brochure which has been prepared for interested companies, professional and other associations. All enquiries should be addressed to the exhibition director, Hamilton House, Mabledon Place, London, W.C.1. (EUSton 2442-7).

Journalists to Sit In Judgment

THE panel of judges invited by the British Association of Industrial Editors to consider this year's crop of entries for its annual national house journal competition have now been named. They are: Michael Farr, editor, *Design;* Peter Glemser, head of special projects, *Readers' Digest*; Kenneth Harris, industrial correspondent, *The Observer;* R. S. Hutchings, editor, *The British Printer;* E. C. Mackenzie, assistant managing director, Crawfords International Advertising; L. E. Morris, director and group editor, Heywood & Co. Ltd.; and John Ryan, editor, *Scope.*

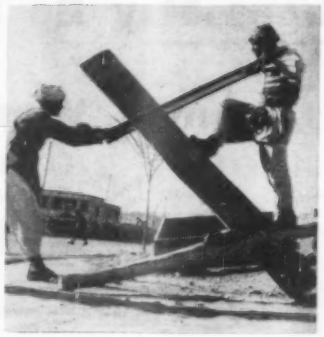
This year house journalists will be competing for two new trophies as well as the "Industrial Editors' Trophy" presented by the Monotype Corporation for the best internal house journal of the year. These are the "Kings Town Trophy," presented by the Kings Town Engraving Co., Hull, for the best journal produced primarily for external readership, and the "House Story of the Year Trophy" given by Shell-Mex and B.P. Ltd. for the best single story in an internal journal designed to foster good fellowship amongst its employee readers.

Other special awards—for the best internal house journal in its first year of issue, and for the best annual publication—are also being offered for the first time.

The competition has now closed. At the time of going to press the organisers expressed high hopes that this year's entries would top last year's record of 260 journals.

'Bulging' with Facts

THE wide interest in its two conferences held last year to discuss the "bulge" (the increased numbers of young people who will be leaving school and entering industry and commerce in the next five years), has caused the British Association for Commercial and Industrial Education to print 500 extra copies of the December issue of its journal. This contains a detailed summary of each of the main speeches given by such speakers as Lord Hailsham (then Minister of Education), the Minister of Labour, and Mr. W. J. Carron, president of the Amalgamated Engineering Union. Copies are available to non-members at 5s. each, from 26a Buckingham Palace Road, London, S.W.1.



Not quite as easy as falling off a log, perhaps. An ILO handicrafts instructor, working in Nepal, recorded this strange plank-sawing scene.

Packing the Programme

ALTHOUGH the theme of the forthcoming packaging conference at Eastbourne is to be "Packaging and Profit", one part of the programme falls within the personnel manager's field. The first session is devoted to a consideration of the packaging executives' position in industry—how to select, educate, train and remunerate him. Another session deals with his position in the management structure.

Primarily aimed to rally industry against the appalling misuse of profit by bad packaging (it costs the nation many millions of pounds a year, say the organisers) the conference will take place at the Grand Hotel, Eastbourne, from April 24-26. Enquiries to the Institute of Packaging, 20-21 Took's Court, Cursitor Street, London, E.C.4.

Shock Absorbers

REDUNDANCY, which is currently making an unwelcome come-back, has caused the closure of Thomas De La Rue & Co.'s Strathendry factory at Leslie, Fife. The decision to close down the factory by March 31, has been reached after a long period of endeavouring to find alternative work for the factory following curtailment of government work. The firm's managing director, Mr. A. G. Norman made this announcement to the staff of 130 during a recent visit to the factory. Employees, he added, will receive a cash bonus related to total service, while the company's personnel department will co-operate with the local Ministry of Labour office to find alternative employment for everyone affected.

Clean Cooking

THE vital importance of cleanliness in the kitchen is the subject of a new film by the Gas Council. To illustrate how easily and quickly germs multiply on badly washed utensils and cutlery, **Keep it Clean** (UK 2511) shows, in story form, how a slapdash attitude towards kitchen hygiene brings a family down with food poisoning. Running for 25 minutes, the film is available free of charge.

Central Film Library, Government Building, Bromyard Avenue, Acton, London, W.3. (Tel: SHEpherds Bush 5555).

Foreman Training

THE Fourth Report of the National Advisory Committee for the Training of General Foremen in the Building Industry stresses the importance of careful selection and training for such men. This was the primary responsibility of employers, but study courses in themselves were not enough. It had to be backed up by practical experience on the site.

Appendices to the report give some of the questions set in previous examinations in foremanship study and list some of the technical colleges which are offering, or are prepared to offer, various types of foremanship courses.

Safety Money

AS an inducement to smaller firms to take an active interest in the work of the Aberdeen Industrial Safety Group, annual membership subscriptions are to be graded. Firms with less than 50 employees will now pay 2 guineas a year; larger units will pay 3 guineas. Group chairman, Mr. F. Martin, recently commented on the difficulty of increasing interest amongst firms in the area. An open meeting two years ago attracted an attendance of over 500, but recent meetings have had audiences of only 30 or less.

* * *

A EUROPEAN RESEARCH programme is to be progressively established by the European Productivity Agency in liaison with national productivity centres, to develop scientific research into human problems of work. Another item on the programme is the training of research workers.

When Deductions May Be Legally Made from a Worker's Wages

The Truck Acts Are Strict but not Quite Impossible

WORKS discipline, dealing with problems like late clocking-on, bad work, etc., is likely to trouble personnel managers for many years to come, whether industry is capitalist, socialist or communist controlled. Most firms have a code of rules dealing with these problems and they probably provide for some kind of appropriate punishment, usually in the form of a fine or a deduction from the wage packet.

As I mentioned in the article in the January issue, these practices are regulated by the Trunk Acts which lay down rules for firms which wish to enforce them, and I shall now deal with them in detail.

The basic principle applied by the Truck Acts in these cases is that wages must be paid in full and that any contract for the employment of a workman providing for deductions to be made from wages and paid to the employer is illegal and void. A limited number of exceptions are allowed to enable deductions to be made from wages in favour of the employer where no harm is likely to result to the employee.

Amongst these fines and deductions are allowed, subject to certain rules. Before dealing with these rules, however, I would like to make it clear that there is a distinction between deductions paid to the employer and deductions paid to a third party. The Truck Acts apply only to deductions paid to (or retained by) the employer. The law does not prevent an employee authorising his employer to deduct a sum from his wages and pay it to a third party, provided there is a real payment over.

In the case of fines the Truck Acts allow an employer to make a contract with an employee for the deduction of fines from his wage packet, provided that;

1. The contract specifies the acts which will incur a fine, and the amount of the fine.
2. The contract is either written or the terms are contained in a prominent notice.
3. Acts which incur a fine must be only such that they have caused or are likely to cause damage or loss to the employer.
4. No fine may be deducted unless the employee is given particulars of the act and the amount of the fine.
5. The fine must be fair and reasonable.

The Truck Acts further allow an employer to make a contract with an employee for deductions to be made from his wage packet in respect of bad work or damaged goods, provided that;

1. The contract is either written, or the terms are contained in a prominent notice.
2. The deduction is made in respect of the act of the employee or of someone for whom he is responsible.

Points of Law—6
PERSONNEL MANAGERS' CASEBOOK

3. The deduction is not more than the loss suffered by the employer.
4. No deduction is made unless the employee is given particulars of the act and the amount of the deduction.
5. The deduction must be fair and reasonable.

The Truck Acts, however, apply only to deductions made *from wages*. If therefore an employer pays only for the hours worked as shown on the clocking-on card, or pays £1 for a good article and 10/- for a bad one, then these rules do not apply. The Truck Acts apply to calculations of the gross-to-net variety, but not to the actual calculation of the gross figure.

This principle can be used, a least in the case of deductions for bad work, to exempt such a system from the application of the Truck Acts, but generally speaking it will not enable a similar arrangement to be made for fines since of their nature fines are deductions made from wages already calculated.

It is to be hoped that firms do not make use of these legal loopholes to impose onerous contracts on their workmen since there are other, and probably more profitable, ways of paying an efficient man more than an inefficient man, without infringing the Truck Acts. In most cases for example, a bonus is not part of a man's wages, but is an "ex gratia" payment or reward for working well and can be paid or withheld without constituting a deduction within the meaning of the Truck Acts.

An example of what is meant by the first rule dealing with fines is given by the case of Squire v. Bayer and Company, which was reported in 1901. Bayer and Co. included in its works rules, the rule that "all workmen shall observe good order and decorum while in the factory", and the penalty for a breach was a fine of 6d.

The firm allowed the employees to have dinner between one o'clock and two in the workroom, where the rules were still in force. One afternoon an employee called Helen Robbins was playing a small harp and several other girls were dancing in the workroom during the dinner break. Miss Knight, a forewoman, stopped them and reported it. As a result they were fined 2d. each.

This prosecution was brought against the firm by the Factory Inspector, by virtue of his powers under the Factories Acts, for deducting fines contrary to the Truck Acts. It was argued that the rule (quoted above) was too vague and did not *specify* the acts which would incur a fine. It was proved, however, that the dancing was raising dust in the workroom which housed valuable machines, and which were likely to be damaged thereby. In addition Robbins agreed that if Miss Knight had been there she would not have played.

It was held therefore that although the rule might not be clear in every case it was plain that at least Robbins knew that she ought not to have played her harp and the fine was held to have been lawfully deducted.

BRIEFCASE

An Engineering Firm Gives Industry a Lead

By DONALD MITCHELL

We are beginning to wake up to the need for commercial apprenticeships. Here is one such scheme that is already operating successfully.

"There has been too much readiness to think in terms of the shop floor, the laboratory and the drawing office rather than the needs of the business organisation as a whole. The office no less than the shop floor has its contribution to make. . . . The achievements brought about by the laboratory can be lost unless the commercial side is maintained at an equal pitch of efficiency".

WITH these words, the Hon. R. A. Balfour, president of the Association of British Chambers of Commerce, announced last summer the introduction of a scheme drawn up by his Association to train apprentices for the trials and tribulations of commerce. More pontifically, the scheme was described as "a comprehensive combined theoretical and practical training against a standard which will have national recognition". It held out the promise to employers of a better chance of getting suitable staff for the commercial side of their undertakings. To thousands of school leavers at G.C.E. level it offered the chance of a worthwhile and well-paid career.

The scheme, which is based on a Deed of Apprenticeship covering a five-year period of education and training, has met with an encouraging response, notably in medium and large firms in manufacturing industries. And sometimes, stressed an Association spokesman, it has been technical management that has urged the commercial side into doing something about training. One difficulty outstanding, as it were, is that many firms are still not clear about the scope and purpose of commercial apprenticeships.

One firm which may be able to help in this matter, then, is British Oxygen Engineering Ltd., of Edmonton, North London, who have been running a commercial apprenticeship scheme since 1955 and who definitely seem to know where they are going with it. This training was started, says the firm, because a progressive undertaking needs men skilled in commerce and accountancy in addition to craftsmen and technicians. To this end, one of their own accountants drew up a syllabus for a five-year course of study leading to the chance to qualify for admission to one or more of the following professional bodies:

The Institute of Cost & Works Accountants;

The Institute of Certified and Corporate Accountants;

The Chartered Institute of Secretaries.

So far eight boys (two in 1955, three in 1956 and three in 1957) have been accepted for the course. These numbers are small, but, as the firm's training officer, Mr. T. Devine, explained, recruitment has been based on the firm's estimated needs.

Selection

Selection is made by personal interview and written test and normally candidates should be between 16 and 17 years of age and have the General Certificate of Education at Ordinary Level in five subjects, including English and mathematics. Entrants are on probation for one year, on satisfactory completion of which a five-year Apprenticeship Agreement is signed. This includes, of course, the year already served.

The apprentices, in the usual way, undertake to follow the approved course of study and to sit for the appropriate examination. For its part the company pays the course fees and refunds examination fees for examinations passed. During this five-year period the company also, of course, pays its commercial apprentices at the same rates as all other apprentices. These rates are as follows:—

Age	Wage	Weekly Merit Awards		
		A	B	C
15	48/7	—	—	—
16	59/–	5/–	3/6	2/6
17	69/–	6/6	5/–	3/6
18	92/11	8/–	6/–	4/6
19	108/8	10/–	8/–	6/–
20	127/10	12/6	10/–	8/–

The actual course of study, which includes attendance at day school one day a week, is as follows:—

First Year. Estimating Office, Programme Control Office, Cost Office, Production Control Office.

Second Year. Cost Office, Time Booking Offices, Wages Section, Statistics Section, Purchasing Office, Goods Inwards Store.

Third Year. Cost Office, Power-Samas Machines Section, Stores, Plant Contracts Office, Financial Accounts Office.

Fourth Year. Financial Accounts Office, Cost Office.

Fifth Year. Financial Accounts Office or Cost Office.

An interesting point is that all commercial apprentices must spent six months on fitting and machine work (actually doing the job at the bench) so that they get some knowledge of the company's methods of machining and production to help them with costing and estimating.

Because this apprenticeship scheme involves five years' study, the company have not yet of course been able to judge results. There is every proof, however, from the measurable progress to date, that its selection methods are right on the mark. All the boys are making headway—two have already taken their National Certificate in Commerce—and all are really keen to qualify as cost and works accountants.

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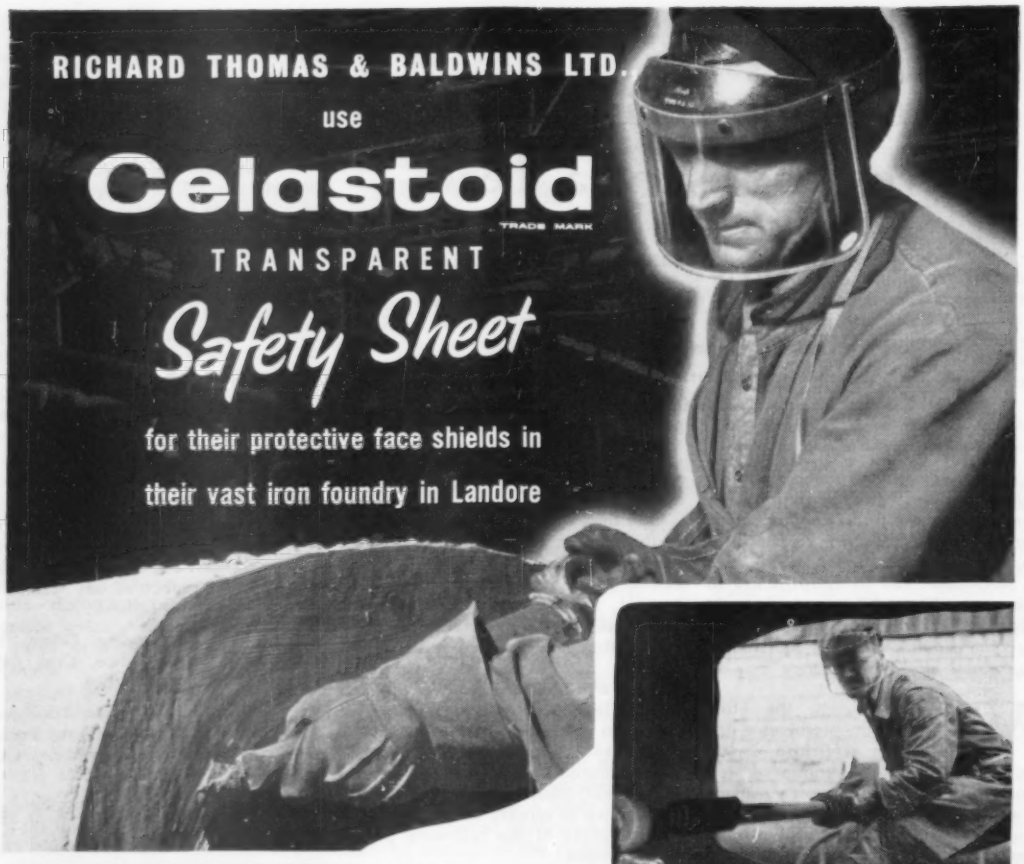

Operating a pneumatic grinder for the removal of metallic scale from the inside of Ingot Mould Casting.

ABOVE
Operating a pneumatic chisel for the removal of metal fins from an Ingot Mould casting.

Cleaning out Slag Tap-hole of a Cupola Furnace used for the melting of Pig Iron.

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The three face shields illustrated are made by Safety Products Ltd.

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Protecting the Face and Eyes is Still a Major Management Headache

BY A SAFETY OFFICER

The equipment is first class. The problem is how to ensure that the men will use it

IT would probably be true to say (without conscious humour) that the greatest single cause of headaches amongst factory occupiers, safety officers and supervisors who are concerned with workers' safety is the problem of head and eye protection. Besides the requirements of Section 49 of the 1937 Factories Act, numerous Statutory Regulations and Orders call for eye protection, and the situation is further complicated by the large sums frequently (and rightly) awarded at common law to employees who have been the victims of eye accidents where some degree of negligence on the part of the occupier can be shown.

Bearing in mind that if a prize was awarded for the most-quoted judgment each year Parris v. Stepney Borough Council (1951) would win by a street and with a regularity rivalling the appearance of Father Time at midnight on December 31 each year. Let us not labour the legal aspect, but mention must be made of a very recent little-publicised judgment when, at Middlesbrough County Court, Judge Cohen awarded a total of £165 damages to a welder who was injured by a spark which entered an eye *whilst he was wearing eye protection.*

The interesting feature of this judgment is that it was held that goggles must provide 100 per cent protection, and as the judge was able to insert a pencil between the bridge of the goggles and the injured man's face, there was a failure to do so in this case. Although certain other features had a bearing on the result, the fact remains that this decision casts doubt upon widely-held views such as "It is better to provide eye protection which will be worn, but gives 75 per cent protection, than that which gives 100 per cent protection but is unworn". Apparently you do so at your peril.

Which brings us to the question: "How does one ensure that eye protection is worn?" Include me in what the public opinion poll people call the third, or "don't know", group. Apart from the application of disciplinary measures where there is a flagrant breach of works regulations calling for eye protection—and I have never known this method have any other than a purely temporary effect—there are other perhaps more subtle methods which may not provide the complete answer but have the effect of winning converts.

A Works Sample

The management at a heavy engineering works decided to make a personal issue of eye protection to all employees. They selected six widely different types of protection (each was, of course, suitable for the kind of work carried out), sent samples to each workshop and gave everyone a free choice. The result—not a great deal of variation in the total of each type selected, and men working on adjoining and identical machines chose differently. Still, many employees regularly use their eye protection, possibly because they had *chosen* it.

In a chemical works, four samples of eight types of eye shields or goggles were obtained and issued to different workmen who were asked to fill in a simple questionnaire giving their opinion of the eye protection after one week's continuous wear. There was a "general post" at the end of each week and, after eight weeks, 32 reports were available from which it was possible to select the most popular type. Absolute standardisation did not follow, but, although employees still enjoyed a free choice, the advantages of the most popular type, set down with a certain degree of unanimity by those who had taken part in the tests, were pointed out and about 90 per cent of employees used this type.

Incidentally, this test revealed that one or two types previously considered suitable were really quite unsuitable because of pitting of surface of lens in a corrosive atmosphere, a fault hitherto unsuspected in the less exhaustive tests to which they had previously been subjected.

There remains what is perhaps the greatest single factor of all, and that is example. If departmental heads, works managers and even company chairmen would make a practice of wearing eye protection whenever they are in a part of the works which demands it, there would follow an upsurge of enthusiasm for this sort of protection. We are that kind of nation.

Safety officers, by the way, might search their conscience at this juncture and ask themselves if they are always careful to set an example in this respect. It is not a bad idea to wear a helmet on the plant as well, and I know of one or two District Inspectors of Factories who will not enter a works unless suitably protected by helmet and eye shields—a practice which could spread with advantage.

Before the moralising ends, take heed that you *never* make the wearing of eye protection compulsory in a section of the plant unless you are absolutely certain that you can achieve a reasonably high degree of compliance. Think of all the people who will pass through this section—can you make sure protection is available to all of them? What is the supervision like—will they adhere to the rule? The fact that they them-

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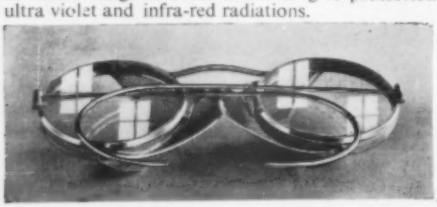

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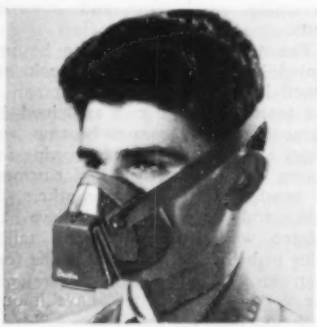
selves have asked for such a rule means nothing, because the temporary enthusiasm which produced the request was probably engendered by a near-accident in their department, the effect of which will wear off as quickly as does the slowing-down effect of seeing a collision on the highway. A better way of dealing with such requests is to try hard by persuasive and other methods to increase the percentage of workers who are protecting their eyes and to ensure that protection is freely and readily available.

A Wide Range

Let us now examine the multitudinous types of head and eye protection available. British Standards exist for protective filters for welding and other operations, equipment for the eyes and face protection during welding, green protective spectacles and screens for steelworks operatives and, the most recent and comprehensive of all, industrial eye protectors for operations other than welding. An obvious precaution when purchasing is to ensure that where applicable the appropriate B.S. is complied with.

The practice of wearing helmets has increased in the past few years. An initial difficulty to be overcome is the fear of ridicule, so make sure the helmet looks right. Many types of material are

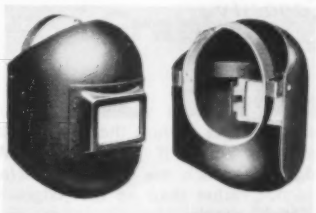


A modern anti-dust respirator (Dustfoe 66) incorporating a facepiece cushion of neoprene sponge. The aluminium facepiece is pliable enough to be moulded into shape, if needed.

now available and some thought must be given to the conditions under which the helmet will be worn. For example, it would be fatuous to supply helmets with an inadequate dielectric strength for use where there was a danger of contact with live wires.

Similarly, plastic helmets should not be worn where high temperatures exist. An example which comes to mind is a man who was working inside the flue of a chimney stack while the temperature was still high, the fires having been drawn only a few hours before. He was wearing a plastic helmet which softened in the heat and subsequently flew from his head in an upward direction, eventually flattening itself on the ceiling of the flue. Inquiries which followed this incident elicited the information that another user of these helmets had the same experience.

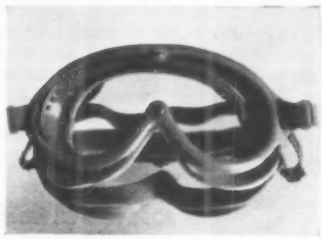
Nevertheless, the exceptionally light weight coupled with strength of well-made plastic helmets renders them eminently suitable for certain jobs. Fibre glass and laminated bakelite are other popular materials.



Modern fibre welding helmets are extremely strong though light in weight. An adjustable head band makes for wearing comfort.

Progress in the optical industry has been most marked in the last decade or so. Not very long ago choice of prescription spectacles was limited to what the proletariat referred to as "horn-rimmed" or "plain", now the choice of styles and frames is so wide that women in particular find as much difficulty in selection as when buying a hat. This progress has extended to the eye-protection side of the industry, too, and it is not unusual to find a choice of twenty or more kinds of industrial safety spectacles or other forms of eye shields in a maker's catalogue. Tempered and toughened lens can be chosen coupled with a variety of lightweight and adjustable frames. There are glasses available for specific purposes such as working at furnaces, chipping, riveting, grinding and operations in smoky atmospheres.

Where goggles or spectacles are unpopular, face-shields of varying kinds can be substituted. Note should be taken of locations where this kind of protection is to be worn, because the face shield might hamper a workman in a confined space (for example, a maintenance man working amongst overhead pipelines near the ceiling) and the shield removed with possibly serious consequences.



Flexible goggles are becoming more and more popular. This one includes a sweat-absorbent foam pad to prevent misting.

Growing in popularity are flexible eye-shields, particularly with removable and replaceable screens. Giving a good field of vision, these shields can be worn over spectacles and are soft and comfortable to the face. They possess the drawback of steaming up in certain conditions and, although many ingenious devices have been incorporated in these shields to counteract this effect, none has been fully successful. This problem is international, by the way, for the writer received an inquiry from the safety engineer of a large chemical company in the U.S.A. which made it clear that the same problem is unsolved in that country.

It seems to me that it should be emphasised to wearers that the eye shields should first be cleaned with an anti-mist compound and the air vents examined for obstructions. Then a reasonable period of work may be carried out without steaming up trouble, after which the wearer should retire to a place of safety, remove the eye shields, re-apply the anti-mist and resume work. The trouble is thus reduced to negligible proportions and occurs, it should be emphasised, only in particularly unfavourable weather conditions.

The same considerations apply to P.V.C. and other types of hoods. If we examine the situation logically, it cannot be otherwise. If you require complete protection (and you would not be wearing a hood if you didn't) then the flow of air must be restricted in some way, otherwise the corrosives, or whatever you may be protecting yourself against, can penetrate. Some success has been obtained by supplying hoods with an air supply from a compressed air line, but movement is consequently restricted and complete elimination of misting has not always been achieved.

If these drawbacks are recognised and dealt with, the advantages of suitable protection far outweigh the disadvantages.

How Can We Measure Executive Talent?

Today's Rating Schemes Place Emphasis on Judgment Capacity

LAST month I raised the question of merit rating schemes for management and supervision and suggested that, this month, we might take a closer look at some good ways of running them.

There is no "ideal" system, but success depends on finding a system which fits the requirements of your firm and then working hard to make it function well.

There are, however, some guiding principles. The basic requirement for any scheme is to analyse very carefully what are the most important aspects of the job and then to rate the man doing the job on his effectiveness in these critical fields. For example, one electrical firm rates its departmental superintendents on the way they do their day-to-day job, under the headings of keeping down the cost, keeping production schedules and producing good quality goods.

They are, however, also rated under three headings designed to show how well they are preserving and improving the *long-term* interests of the company. These headings are: do they train and develop new supervisors; do they maintain good labour relations; and do they develop and improve new production processes?

Other firms try to lay down annual work programmes for the management group as a whole at the beginning of each year. It is then possible, they feel, to review at the end of that period how effective individual executives have been in accomplishing what they set out to do. Behind this approach and other similar approaches (such as judging an executive's competence by whether he keeps within his departmental budget or not) there is the idea that it is better, if possible, to make judgments which are based on *factual* evidence rather than on the judgments of other people.

However, most schemes have to include some factors which depend on human judgment and then it is important to have the rating done by more than one person so that personal biases can be ruled out.

It is also important to discuss the final rating with the executive concerned since we all need to know where we stand in the estimate of others. This is equally important whether the rating determines the size of the bonus to be received or whether it is mainly a progress report.

If this discussion is to prove at all profitable it seems to me that some kind of a factual record of what the man has or has not achieved throughout the past weeks or months should be kept regularly by his superior. Otherwise the most recent happenings are likely to loom too large and too significant. I have made here some general points about rating executives. It would be most interesting to hear from some of you how actual schemes operate in your organisations.

SEND US YOUR IDEAS!

If you ever feel like letting off steam on some management topic, why not write to Discussion Leader. We pay a guinea for each letter published.

Giving Youth its Head

Last month we had a letter from a management trainee explaining that he did not feel his firm was using his talents to the full. This is certainly a thorny question for I heard recently a little about what happened when a management trainee *was* given his head.

In this case the business was a family one making furniture. The daughter of the owner was engaged to be married to a young man who intended to make a career in business and was about to take the post-graduate course in Business Administration at Harvard in the U.S.A. The young couple were married and spent two years in America. When they returned the husband was offered, and accepted, a job in the family business.

Full of new ideas he suggested that the factory was run on old-fashioned lines. He asked for, and gained from the owner (his father-in-law) permission to make a thorough study of the different departments after which he hoped to make some suggestions for increasing production and lowering costs.

The next Monday morning he presented himself, with a notebook and pencil in his hand, to the foreman of the assembly shop and explained his purpose. The foreman became very angry and said he was not having any young graduate study his department. It would upset all his workers, he said, and they would believe the trainee was "snooping" and telling tales to higher management. The foreman insisted on going at once with the young executive to "have it out" with the head of the firm.

I wonder what you would have done if you had been in the owner's place? How did this situation arise and how could it have been avoided, do you think?

This problem of lack of understanding between different groups often arises also where the young recruits are scientists with a university training which has fitted them to talk to each other in their own specialist language, but which has not taught them to know how to translate this language into terms which the production foreman—or the worker with practical skills—

can understand. Sometimes the scientist is genuinely unable to put his work into layman's terms; sometimes, however, he does not see the *necessity* to do so. His attitude is rather one of "well, they employed me to do this work and they should leave me to get on with it in my own way and trust me to give the results".

In noticed in a recent article in "Fortune" magazine that the need to keep a closer control over research "boffins" has led to some serious re-thinking in American management circles. The day when a paint company president gave voice to a general view when he exclaimed: "Who am I to tell our scientists what to do and how to do it? I can't even understand them half the time—all I know is they have done great things . . ." has long since passed. Present-day managements want to know what the research departments are up to and they want to have control over what is going on.

The Research Administrator

A New Executive

In the States this is leading to the emergence of a new kind of executive with the title of "Research Administrator". He is recruited, mainly from the ranks of scientists, because he also shows some administrative ability, and he is trained by being assigned for short periods to such departments as personnel, accounts, engineering, and production control. He is then expected to have a broader appreciation of the way research fits into and can best serve the rest of the factory community. His job is not an easy one. He must be a good scientist but not lose himself in detail. He must have a business flair for selecting research projects with a high possibility of economic return, but he must also dare to gamble on research projects which may never be a financial success.

The emergence of this new kind of administrator is one way of solving the problem of communication between general management and the scientist—a problem which will become even more acute as the new technology gets more into its stride.

There are other possible solutions, however. The trend towards greater and greater specialisation of training should, for example, perhaps be halted in favour of a broader curriculum. The technologist could then learn something about the impact of his work in other management fields—particularly in those of human relations and production—and he should be taught to recognise the importance of communicating his own expert knowledge in understandable terms to others. What do you think?

On the general subject of increasing satisfaction at work which we have been discussing over the past few months, I have just noticed the report of a most interesting pilot survey made partly as an attempt to explain a labour turnover of as much as 60 per cent in some London retail stores. The sales staff put five factors in this order of importance to them in their work:—

1. A chance of promotion;
2. Working conditions;
3. Good working companions;
4. A chance to improve their knowledge and skill; and
5. Working in an efficient organisation.

What about pay?

DISCUSSION LEADER.

Graphology as an Aid to Personnel Selection

By JOAN CAMBRIDGE

Modern methods of studying handwriting leave nothing to necromancy or guesswork. As this case history shows, it is an art which can be very useful in selecting people for jobs.

ALTHOUGH the value of scientific graphology is now recognised and appreciated by many, and the advice of a trained practitioner sought in varying problems arising in personnel work, it is a fact that many people regard the graphologist as a crank.

Graphology as an art dates back at least to the fourth century A.D., when Chinese philosophers noted the connection that existed between the strokes of the brush, used as the writing instrument, and the personal characteristics of the writer.

Graphology as a science is comparatively young, starting with the work of Klages in Germany and of Michon in France (who, in 1871, introduced the term "graphology") and progressing through research and patient investigation to the experimental work of Dr. Saudek, until on the Continent today graphology is read as a subject at seven universities. A great advantage of its application is that the expert has no need to have personal contact with the individual concerned in the report, so that, unlike many other projection tests, there is no unnatural restriction or false behaviour. Its non-commercial uses are also many and varied, and the most important merit brief mention.

In the field of education, particularly when dealing with problem children or

We have the actual documents and handwriting specimens concerning the case history referred to in this article, but as they involve people still living we cannot publish them.

THE EDITOR.

juvenile offenders, causes of maladjustment are determined by analysis, and through vocational reports, based on these graphological findings, best use can be made of latent capabilities, to enable the personality to overcome, through positive achievement, the destructive force of frustrated energy.

Legally, the opinion of an expert is sought in matters relating to questioned and suspect documents and anonymous letters. The police have their own special courses of instruction on the subject of identification, and although in this country, in courts of law, character analysis does not arise (merely the establishment of identity), the fact that handwriting is so accepted as an expression of individuality is implicit in the importance attached to a verified signature.

As an accepted projection of personality, use is also made medically, of handwriting, to give an indication, through analysis, of weaknesses of temperament, and so as an aid to diagnosis in nervous and mental disorders. In the United States research is being made to implement the value of the special indications in connection with susceptibility to alcoholism, and also to particular physical diseases.

In analysing handwriting, modern methods leave nothing to guesswork or a psychic approach. Although a deep understanding of human nature is essential for accurate synthesis, the protractor and measuring rule combine with lens and set square, to ascertain each variation of the stroke. Not only are dominant features considered, but also those so-called insignificant marks, which are in effect of greater importance, and the amount of pressure used, at the start and finish of a line, at the top and bottom of a stroke, as well as in each line of the manuscript, is thoroughly investigated. In all, the handwriting is scrutinised from 26 different standpoints, and the results balanced; for each trend is interdependent when the psychological significance of these is considered and the full analysis built up.

Commercially, the practical application of this work is easily appreciated by those to whom accurate assessment of personality is important. Although the experienced interviewer probably makes few mistakes in the final selection of personnel, his work can be made easier by pre-knowledge of the applicant's outlook and behaviour pattern. He is often conscious of the wastage that occurs, both among those applicants who never appear for interview, having been discarded for no valid reason, in order to save expense and valuable time, and among those who, being called for interview owing to apparent worth, appear personably unattractive.

Graphological reports are not intended to replace the interview, except in special circumstances, when a complete personality portrait is usually supplied, covering every aspect of the behaviour pattern, including the intellectual, moral, social and economic approach. **But they are best used to supplement the interview and to provide a key for acute questioning at the time of selection.**

Specific examples provide valuable evidence of success, and the following case histories are of particular interest, because of the trouble taken by the interviewer to study the applicants after receiving graphological advice, and in the case of the successful candidate, after selection.

Which Girl ?

A managing director wanted a private secretary who, as well as dealing efficiently with office routine, would be capable of travelling with him abroad and of entertaining business contacts; it was therefore essential that she should get along well with people and be liked, as well as having a quick grasp of affairs. He also hoped to find a girl who would possess enough enthusiasm to enable her to take advantage of the great scope of a rather exceptional job. In fact, owing to special circumstances, the employer had, before consulting the graphologist, chosen two girls from those who applied.

The one, Miss A, who seemed on the face of it to be the more suitable, since she possessed excellent intellectual and language qualifications, was from her letter obviously more experienced and sophisticated. Her graphological report, however, noted that although she was a vital personality, capable of creative thought, had a quick brain and a grasp of essentials that made generally good use of opportunity, her enthusiastic friendliness was very superficial and often overbearing, that she found it difficult to accept another's point of view, and was inclined to be intolerant. She needed constant praise and tangible evidences of her worth.

The analysis also indicated that her emotions were very unsettled, making her unreasonable at times. It was also the cause of a very variable outlook, so that she would be likely to be more concerned with the reactions of people towards herself and her own prestige, than with smooth relationships and the success of her employer's work.

Disappointed as a result of this report, the employer took the trouble to get to know her through further, more social, meetings, and he was able to confirm that he found her in an emotional state in which she seemed over-anxious to get married, that her egoism, accentuated as it was by this outlook, made her, on acquaintance, unco-operative and over-imaginative, and very sensitive to personal slights. In view of her temperament, she was obviously unlikely to settle into a permanent post, and was likely to make more difficulties than she was likely to solve. She was therefore unsuitable for the job.

The other girl, Miss F, had, according to her report, a much less definite personality, was a slower, more cautious thinker, but was receptive and very anxious to please. Immaturity and dependence on strong leadership were her main failings, combined with a rather exaggerated need for personal security. But she was basically well-balanced and reliable, with none of the conceit that marked Miss A.

It transpired, as a result of personal inquiry by the employer, that this girl was very much over-shadowed by a brilliant elder sister, and that family bereavement had made her over-conscious of financial security, facts which had combined to impede her natural enthusiasm and initiative.

Feeling that he possessed the necessary patience to lead her slowly and taking graphological advice regarding his own personality, for in this, as in other cases of close business relationships, a certain measure of compatibility is essential, the employer decided to engage her on trial for three months.

Being a man who had the gift of inspiring confidence through skilled encouragement, the arrangement was an unqualified success. The girl remained with him for over three years until, conscious of the great demands of the job, which allowed little time for personal friendships and recreation, she decided to make a change. It was interesting to note in this respect that, despite her developed self-confidence and more mature approach to life, the basic need for personal security finally found expression in her recognised desire for marriage.

Graphologically this case was particularly interesting, for the director was able and took the trouble to confirm the presence or absence of 67 qualities mentioned in the original analysis.

P.M. Names & Notes

News Snaps . . . . . .

GETTING THE BEST out of machines, materials and men will be the theme of a conference in Brighton next month, for catering managers and others concerned with employee food services. The twelfth such conference organised by the Industrial Welfare Society, it will be held at the Grand Hotel, on March 14-17. A practical approach to the problem is promised with papers on handling staff, large-scale commodity selection and the buying of equipment. The programme will be supplemented by case-study sessions and report work for delegates.

* * *

£300 FOR AN IDEA, the largest award since the company's Aero Engine Division suggestion scheme began, has been paid to James Millar, a bricklayer engaged on furnace maintenance work, attached to the Hillington factory of Rolls Royce Ltd. His suggestion, the first he has ever submitted, has given the firm a cheaper, better method or re-lining hearths in high-temperature charger-fed heat treatment furnaces. The cheque was presented on Christmas Day. The previous highest award of £175 went to a chargehand at the Derby Austenal Foundry.

* * *

NEW YEAR GIFT for Hoover employees from their managing director, Mr. S. Roberts, was the news that the company was increasing at once the rates of sickness benefit for all hourly paid workers. For those who have been with the firm for five years or more the benefit is now 75 per cent of their pay.

* * *

PRIDE IN THE JOB was the motive for an outing with a difference, organised by the C.A.S. Group, which last month took a party of employees *to* a factory instead of away from one. Top management was left behind when they boarded a reserved first class railway coach at Waterloo and travelled down to Gosport to see a 67,000 sq. ft. antibiotics factory recently completed by C.A.S. (Industrial Developments) Ltd. Mr. Colin A. Samuels, managing director of the company, explained: "We always do this after the completion of a major project . . . They (the secretaries, typists, clerks and office boys from a dozen or so London offices) worked just as hard as the men on the site."

* * *

WELL-EARNED REWARD of £100 in shares has been presented to employees who helped increase one firm's annual turnover from £703 to £43,000 in 10 years. This motor repair firm, Stewart Industries (Derby) Ltd., which was formed in 1947 as a one-man concern, now has its own workshops and operates seven days a week. The four employees who have been made shareholders have worked for the company for more than five years. In future every employee who completes five years' service will be given a similar holding.

* * *

PERSONNEL MANAGER of Stanley Works (G.B.) Ltd., Sheffield tool manufacturers, Mr. R. Rawding, aged 64, has been presented by the firm with a gold watch to mark his 25 years' service. He is also treasurer of Sheffield branch of the IPM, former chairman of Sheffield Industrial Safety Group and a member of the Sheffield Group Advisory Council of RoSPA.

* * *

A GOOD POLICY—that is the title of a new *Take Home Book*, published by Newman Neame Ltd., 390 Euston Road, London, N.W.1, which tells your employees in a vigorous manner the advantages of taking out a life insurance policy. Accidents or illness —says the booklet—life is full of hazards, but you can insure yourself against nearly all of them. Colourful illustrations are by Sprod.

* * *

A RECORD YEAR without a single "lost time" accident won Birmingham workers of Alfred Bird & Sons an afternoon off last month and a celebration lunch on the firm. Their managing director, Mr. T. M. Smith, was keeping a promise made early last year. They will get another free meal if they do the same in 1958.

Honours for Personnel People

THE New Year Honours List for 1958 included a number of people in the industrial and allied fields of human relations, training and welfare. Awards were as follows:—

O.B.E.: A. G. H. Brend, chairman, Society of Industrial Civil Defence Officers; Alderman C. Crowder, chairman, Rochdale local employment committee and disablement advisory committee; J. C. Kydd, for service as chairman of wages councils; G. H. Monkman, chairman, Leeds and District local employment committee; Melrhodd M. Towy-Evans, chief personnel management adviser, Ministry of Labour and National Service; Miss Bessie Tyson, chief catering adviser, H.M. Treasury.

M.B.E.: Mrs. J. N. Best, staff officer, headquarters, Hospitals Welfare Dept., British Red Cross Society and Order of St. John; R. K. Henderson, J.P., chairman, Edinburgh and District Advisory Committee, Scottish Board for Industry; Capt. A. Jones, chairman, Grays local employment committee, Essex; Mrs. Rose G. Kay, personnel officer, administration dept., H.M. Embassy, Washington; D. L. Maxwell, chief youth employment officer, Lancashire; A. G. Palmer, North Thames Gas Board, ex-president, Institute of Industrial Safety Officers; V. E. Swindells, works manager, Thermega Ltd. (Industrial Centre, Ex-Services Welfare Society); D. V. Young, Civil Defence controller, Birmingham Small Arms Co. Ltd.

B.E.M.: Mrs. M. Claydon, centre organiser, Lexden and Winstree Rural District Division, National Coal Board, Women's Voluntary Service; J. McDonald, training officer, Kingshill No. 1 Colliery, Scottish Division, National Coal Board; Mrs. E. M. Scouller, surgery nurse, Paton & Baldwin Ltd., Darlington; F. P. Spencer, apprentice training instructor, Leicester Undertaking, East Midland Gas Board; G. Yearsley, colliery training officer, Celynen North and Craig Fawr Colliery, South Western Division, National Coal Board.

Appointments

Renault Ltd. announce the appointment of **Mr. Denis Jacob** as their personnel manager. Mr. Jacob was personnel manager at Rolls Royce's North London depot until 1955, when he was appointed personnel manager to the Linoleum Manufacturers Association.

* * *

The Scottish Gas Board have appointed **Mr. Charles Murdoch,** C.B.E., as staff relations adviser at their Edinburgh headquarters. Mr. Murdoch who is 55, has held many appointments on trade union and public bodies and is a former secretary and chairman of the Scottish TUC, and former chairman of the Scottish Board for Industry.

* * *

Formerly head of the National Coal Board's industrial training branch, **Mr. J. A. C. Williams,** M.Sc., A.M.I.Mech.E., A.F.R.Ae.S., A.B.Ps.S. has been appointed principal of the College of Aeronautical and Automobile Engineering, Chelsea, London. Now aged 42, he has been concerned with technological education since 1939, when he became a lecturer in aerodynamics at the De Havilland Technical School.

NEW BOOKS ★ NEW FILMS

Getting and Keeping in Touch

Communication in Industry. Edited by Cecil Chisholm, M.A.
Business Publications Ltd. 35s.

HOW do you talk with a man who doesn't know your language? How do you share your ideas? This is a big enough problem in the jungles of New Guinea; it is even bigger and more desperate in industry where the difference between top management and the lowest-ranking employee is not so much that of language as of approach to industry's aims. Ever since the first enlightened management realised it wanted its employees to work with it, not just for it, attempts have been made to build and perfect industrial communications, resulting in house magazines, joint consultation committees, progress reports, suggestion schemes—even personnel managers. These have all been well meant and fairly well taken, but somehow many of these vital ideas remain unshared, and management has gradually come to the conclusion that there is more to it than goodwill alone.

The value of this volume as a textbook on the subject lies not only in its combination of the theoretical and practical approaches, but also in the fact that its preparation has been shared amongst eleven writers, each one an expert in a specific field. Each feature and medium of communication yet devised, written, spoken and visual, is carefully analysed and examples are given of all the systems that can be operated, from closed circuit television to posters, T.W.I. to week-end schools for union branch secretaries. Thus the book is able to cover a wider range than others of its type, systematically developing the subject whilst giving detailed coverage to each particular facet.

To this revised edition three chapters have been added to keep abreast of the developments which have taken place since it was first published two-and-a-half years ago. These deal with automation and redundancy, quick methods of training managers and supervisors, and a new angle on the shop steward's position.

Searching for Scientists

Brainpower Quest. Edited by Andrew A Freeman.
The Macmillan Company, New York and London.

AMERICANS, as a rule, pay far greater honour to their ex-Presidents (while they live) than the British do to their current Prime Ministers. So, when America's Cooper Union for the Advancement of Science and Art invited Mr. Herbert Hoover to attend and address their 1956 convocation in New York, it promised to be a grand occasion. And it was, for two reasons. First, it was exactly one hundred years since Peter Cooper, 19th-century industrialist and philanthropist, founded this tuition-free college for talented youth, striking a blow at narrow specialisation by uniting the aims and energies of science and the humanities. Secondly, the convocation was called to discuss the best methods of finding enough first-rate scientists and engineers to meet the future's technological demands.

Thirty-six leading scientists, scholars, men of affairs, industrialists, philosophers, architects and educationists were assembled to exchange ideas on this, the most pressing problem of our time. *Brainpower Quest* is a verbatim report of the proceedings.

Much of the problem's fundamental urgency, however, has been lost in the editor's attempt to celebrate the two grand occasions with a single fervour. The eulogies of The Cooper Union and American liberal ideals, and the frequent declamatory phrases — "the development of brainpower is the key to tomorrow's world" — may incline the British reader to turn for relief to our native writers on the same subject. He could do no better than give a second reading to the more incisive, down-to-earth views of Dr. B. V. Bowden, Principal of the Manchester College of Science and Technology. But, for all its grandiose treatment, this book should not be dismissed. It will serve well as broader reading for anyone who is at all involved in the problem, which is probably how Peter Cooper would have liked it, living as he did in slower, less desperate times.

Jobs Made to Measure

ERGONOMICS, the technical term for a study of human factors in work, machine control and equipment design, bridges a gap between psychology and work study. It came into its own during the last war when it was applied to the design of equipment for the fighting services. Since then it has had an increasingly important application in industry. In 1949 the Ergonomics Research Society was founded to provide a forum for the exchange of ideas between research and industry, and growth in world wide interest has now inspired a regular publication.

The first issue of *Ergonomics*—printed and published by Taylor & Francis Ltd., London—offers a large assortment of investigation into men and machines, including the adaptation of vehicle design to human limitations, the changing physical demands of foundry workers, the effect of noise on human behaviour, and a comparative study of three methods of training operators.

The journal costs £1 5s. per issue, or £4 15s. per volume, post free. Its editor, Mr. A. T. Welford, a member of the psychological faculty at Cambridge University, aims to fill it with research reports, case histories, reviews of work and literature, discussions of theory and descriptions of new apparatus and methods.

This Feeding Business

Office and Works Catering. James G. New.
Business Publications Ltd. 18s.

THINGS have changed in industrial catering since the 16th century when one John Winchcombe, the owner of a clothing factory, feasted his workmen on a whole ox. Nowadays Mr. Winchcombe's menu would be rather less ambitious, but, more significantly, he would be employing a full-time catering manager to do the job for him. That is how works catering has grown, out of its philanthropic youth into "an important factor in the improvement of output", as the chairman of the Hotel and Catering Institute describes it in his foreword to this book.

In his opening chapter the author briefly sketches the history of industrial catering up to its phenomenal advances during the Second World War. This is his appetiser; the main dish consists of a feast of valuable information from the varied types of catering service through kitchen layout and equipment, fuel, buying, storage and menu planning to the legal requirements of works catering. For dessert he provides appendices listing the professional and advisory bodies in the catering field, and the several staff training and apprenticeship schemes available. And as a savoury there is a formidable directory of equipment and suppliers.

The book is intended for two types of readers—the manager, particularly in the smaller firm, who frequently needs advice on his catering problems, and the increasing number of students who are being attracted to the industrial side of the catering industry. As a handbook and introduction in one, this publication maintains an even balance between the techniques of canteen operation and the guiding principles of staff welfare which first inspired works catering.

Promotion must be worn lightly

Even a minor promotion gives a man power and unless he knows how to use it properly he can ruin himself, cause resentment and unrest among his subordinates and untold trouble to his employer. It goes almost without saying that any means which will eliminate such a risk should be used to the full.

The most effective means comes readily to hand in the shape of 16mm. films from the G.B. Film Library. There is an excellent range available, to hire or buy, which deals exclusively with the problems of Management. Each film demonstrates to men holding authority the personal and administrative problems they have to face, and pinpoints the pitfalls they must avoid.

These 16mm. films are an invaluable contribution to successful personnel relations and should be shown regularly to Management in every kind of Business and Industrial Organisation.

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Telephone: PERivale 7481/9

A brief selection of the 16mm. films available on Industrial Management

CATALOGUE NO.	TITLE	COLOUR B/W	REELS	HIRE CHARGE*	PURCHASE PRICE	APPROX. RUNNING TIME
IF.3954	All I Need is a Conference	B/W	3	£3.0.0.	£60.0.0.	30 mins.
IF.3710	First Impressions	B/W	1	10.0.	£12.10.0.	10 mins.
IF.3779	The Inner Man Steps Out	B/W	3	£3.0.0.	£60.0.0.	27 mins.
IFC.7048	Production 5118	Colour	3	£5.0.0.	Not available for outright purchase	30 mins.
IF.3711	Supervise With Care	B/W	1	10.0.	£12.10.0.	13 mins.
IF.3821	The Shop Steward	B/W	2	£1.0.0.	Not available for outright purchase	22 mins.

**First day's hire. Reduced 50% for each subsequent day*

March Management Diary

BRITISH INSTITUTE OF MANAGEMENT

13-14 **Caxton Hall, London.** The art of selling. 2-day course for salesmen and sales managers.

BURTON MANOR (Burton in Wirral, Cheshire)

2-7 Nature of management. Course for junior managers, manager trainees, etc.
9-14 Women supervisors. The latest techniques of supervision.
24-April 4. Supervisory management. Development course for foremen.

COLLEGE OF PRODUCTION TECHNOLOGY (Great Chart, Nr. Ashford, Kent)

10-14 Five-day foremanship course.
17-21 Method study. 5-day course.
24-28 Five-day foremanship course.

INDUSTRIAL WELFARE SOCIETY

Residential conferences and courses

14-17 **Grand Hotel, Brighton.** 12th conference for catering managers.
21-24 **Bourne Hall Hotel, Bournemouth.** Annual conference for industrial editors.
23-28 **Prospect Hotel, Harrogate.** Joint course (with BACIE and IPM) for training officers.

Courses and meetings at Robert Hyde House

4 Catering for office workers.
6 "New Thinking" Luncheon—Britain's social conscience in 1958. Speaker: Sir John Wolfenden, C.B.E.
13 Industrial Health conference.
19 Non-vocational training for apprentices.
25 Incentives in industry.
28 Industrial Editors' (Welfare) Group. Electronic engraving — let this reduce your costs.
3-7 Junior executive and management trainees.
10-14 Second session of sandwich course on training methods.
17-28 Pilot course on industry and society.
19-21 Work relations seminar for technologists. Third of four sessions.
6, 13, 20 Speaking successfully in business and in public.
6, 13, 20 Discussion groups for office supervisors.

INSTITUTE OF INDUSTRIAL SUPERVISORS

Week-end residential courses

14-16 **Heathlands Hotel, Bournemouth.** Industrial relations, industrial law.
14-16 **Marine Hotel, Troon.** Human relations.
14-16 **St. Ann's Hotel, Buxton.** Incentives, merit rating and job evaluation.
21-23 **Welcombe Hotel Stratford.** The practice of supervisory management.
21-23 **Crown Hotel, Scarborough.** Human relations.
28-30 **St. Ann's Hotel, Buxton.** Work study for supervisory management.
28-30 **Allan Water Hotel, Bridge of Allan.** The practice of communication.

INSTITUTE OF PERSONNEL MANAGEMENT

7-9 **Bournemouth.** Conference of London and South Eastern Region.
16-21 **Harrogate.** 5-day joint course for training officers.
23-28 **London.** 5-day residential study course on staff management in offices.

INSTITUTION OF WORKS MANAGERS

20 **Doncaster.** Training and development for works management.
4 **Leicester.** "People and Production" IWS film.
10 **Manchester.** Present-day industrial relations.
28 **Derby.** Brush up your management.
27 **Lancaster.** Human factors in work study.
6 **Wolverhampton.** The industrial film and you.

NIIP

10-14 Course in selection methods, part II.
24-28 Course in selection methods, part III.

POLYTECHNIC (London) (Department of Management Studies)

5 Modern incentive schemes. Afternoon course begins. 2 weekly meetings.

RoSPA

17-28 **Wadham College, Oxford.** 48th Industrial Safety Training Course.

SUNDRIDGE PARK (Bromley, Kent)

2-7 Sales management. One-week residential course for sales executives and trainees.
9-28 Measurements for management. 3-week residential course.
31-April 2 Work study. 3-day residential course for senior executives.

URCHFONT MANOR (Devizes, Wiltshire)

10-15 The human factor in production. Course for factory foremen, chargehands and union representatives.
17-22 Thinking, speaking, writing. Course of lectures and practical work in committee and report procedure.

February Stop Press

BACIE

28-March 2 **Palace Hotel, Buxton.** The changing pattern of apprentice training. Seventh annual week-end conference.

CITY OF LONDON COLLEGE

5, 12, 19, 26 March 5 Management and the accounting service. Course of five evening lectures.

INDUSTRIAL WELFARE SOCIETY

13 Large-scale kitchens today and tomorrow. Afternoon meeting for caterers and executives.
19 Systematic training of operatives.

METROPOLITAN COLLEGE

Specialised Postal Tuition—Taken at Home in Leisure Time—for the Membership Examination of the

INSTITUTE OF PERSONNEL MANAGEMENT

Also interesting, authoritative (non-examination) postal tuition in Personnel Management, Economics, Business Administration, Industrial Law, Statistics, Social Administration, etc.

Send today for free prospectus, mentioning exam. or subjects in which interested, to the Secretary, G1/85, Metropolitan College, St. Albans (or call at 30 Queen Victoria Street, London, E.C.4).

ST ALBANS

Official Publications

GENERAL

Choice of Careers. New Series, No. 44. **Advertising.** H.M.S.O. 9d. No. 47. **Printing Machine Room Workers.** H.M.S.O. 1s. 3d.

Factory Form No. 398. Dyeing, tanning and chromium plating regulations. H.M.S.O. 4d. **Thermal Insulation** (Industrial Buildings) Act, 1957. H.M.S.O. 6d.

Control of Health and Safety in the United Kingdom Atomic Energy Authority. Report of the committee — chairman Sir Alexander Fleck, K.B.E. — appointed by the Prime Minister. H.M.S.O. 1s. 3d.

STATUTORY INSTRUMENTS

No. 926. The Wages Regulation (Retail Bookselling and Stationery) Order, 1957. Dated May 27, 1957, made by the Minister of Labour and National Service under section 10 of the Wages Council Act, 1945(a) H.M.S.O. 9d. Sets out statutory minimum remuneration and holidays allowed in substitution for previous Order. Effective from June 17, 1957.

No. 943. The Wages Regulation (Rope Twine and Net) (Amendment) (No. 2) Order, 1957. Dated May 30, 1957, made by the Minister of Labour and National Service under section 10 of the Wages Councils Act, 1945(a). H.M.S.O. 3d. Fixes special minimum piece rates for certain female workers and re-defines certain expression contained in previous Order. Effective from June 17, 1957.

No. 947. The Wages Regulation (Linen and Cotton Handkerchief, etc.) (Holidays) Order, 1957... Dated May 31, 1957, made by the Minister of Labour and National Service under section 10 of the Wages Councils Act, 1945(a). H.M.S.O. 6d. Sets out holidays and holiday remuneration in substitution for previous Order. Effective from June 17, 1957.

No. 962. The Wages Regulation (Retail Newsagency, Tobacco and Confectionery) (England and Wales) (Amendment) Order, 1957. Dated June 3, 1957, made by the Minister of Labour and National Service under section 10 of the Wages Councils Act, 1945(a). H.M.S.O. 3d. Varies statutory minimum remuneration and excludes certain workers from some provisions. Effective from June 24, 1957.

No. 1067. The Wages Regulation (Linen and Cotton Handkerchief, etc.) Order, 1957. Dated June 21, 1957, made by the Minister of Labour and National Service under section 10 of the Wages Councils Act, 1945(a). H.M.S.O. 4d. Sets out statutory minimum remuneration in substitution for previous Order. Effective from July 5, 1957.

No. 1109. The Wages Regulation (Aerated Waters) (England and Wales) Order, 1957. Dated June 26, 1957, made by the Minister of Labour and National Service under section 10 of the Wages Councils Act, 1945(a) H.M.S.O. 5d. Sets out statutory minimum remuneration in substitution for previous Orders. Effective from July 10, 1957.

No. 1128. The Wages Regulation (Paper Box) Order, 1957. Dated June 27, 1957, made by the Minister of Labour and National Service under section 10 of the Wages Councils Act, 1945(a). H.M.S.O 6d. Sets out statutory minimum remuneration payable in substitution for previous Orders. Effective from July 12, 1957.

No. 1143. The Wages Regulation (Fur) Amendment) Order, 1957. Dated June 28, 1957, made by the Minister of Labour and National Service under section 10 of the Wages Councils Act, 1945(a). H.M.S.O. 3d. Increases general minimum piece rates for hand and machine fleshing and increases holiday remuneration for fleshers, shavers and unhairers employed on piece work. Effective from July 15, 1957.

No. 1234. The Wages Regulation (Cutlery) Order, 1957. Dated July 11, 1957, made by the Minister of Labour and National Service under section 10 of the Wages Councils Act, 1945(a). H.M.S.O. 7d. Sets out statutory minimum remuneration payable, in substitution for previous Orders, and increases maximum and accrued holiday remuneration payable to workers, other than outworkers. Effective from July 26, 1957.

This is NEWS!

This announcement, published recently, is of particular importance to Personnel Officers, since DAILY MAIL readership is known to come of top educational standard—"position vacant" problems will swiftly and surely be solved through the classified columns of the "MAIL".

IMPORTANT NEW DAILY MAIL SERVICE

THE *Daily Mail* believes that Classified Advertising is today playing a larger part in the life of the community than ever before.

The *Daily Mail* has, therefore, decided on a new policy that will provide the Classified Advertiser with the best possible value for money.

It is a policy that will make the *Daily Mail* readership of some 6,500,000 available to the Classified Advertiser at unprecedentedly favourable rates. For instance

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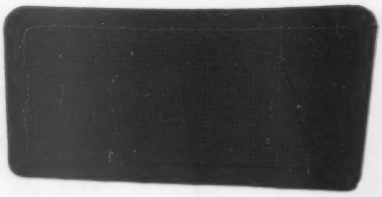
96 ST. VINCENT STREET, GLASGOW, C.2. **CENTRAL 9291**

TANFIELD HOUSE, EDINBURGH, 4. **WAVERLEY 2525**



11 Colours !

gay and practical...

DELARON CHAIR SETS—chair seats and backs in tough, light, easy-to-clean plastic laminates—these are available now in eleven different colours! You can make your choice between white, beige, green, yellow, red, light blue, dark blue, grey, light tan, dark brown, and black! Virtually everlasting, gay and practical, clean at a wipe! Formica Ltd (who produce and shape DELARON CHAIR SETS for chair manufacturers) will gladly recommend an approved supplier.

Write to the address below for a full-colour leaflet with all the facts, showing the full range of 11 colours.

Delaron*

chair sets

FORMICA LIMITED
DEPT C/0 DE LA RUE HOUSE REGENT STREET LONDON W1
* 'DELARON' *is a registered trade mark*

WELFARE ★ SAFETY ★ HANDLING★CANTEEN ★ HEATING★LIGHTING★ OFFICE AIDS★ HOUSEKEEPING

Firms with new products for better, safer working in industry are asked to send details to the Editor with, if possible, an illustration

Welfare

MUSIC FOR INDUSTRY

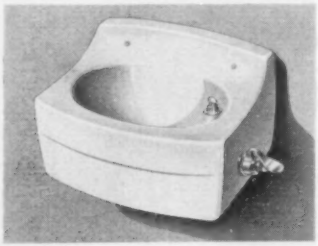
A NEW company—Music For Industry Ltd.—has been formed to provide more music of the "Music While You Work" type. The music is recorded on tape, each of which provides a 30-minute programme without any attention.

The service operates on an inexpensive subscription and constant variety is assured by regular change of tapes. Reproduction quality is said to be high and public address systems, not at present equipped to handle tapes, can be provided with this facility at very low cost and with no major alteration to the equipment.

Music For Industry Ltd., 123 Queensway, London, W.2.

HYGIENIC DRINKING

A USEFUL and attractive welfare aid in the factory is the new **Ceramant** drinking fountain, designed to hang from the wall. It is fitted with self-



closing, press action, non-concussive tap with regulating valve. The jet has a lip guard and is set well above the rim, so that it cannot be submerged. Dimensions: 15 in. wide, 7 in. deep; it juts out 11 in. from the wall.

Twyfords Ltd., P.O. Box No. 23, Stoke-on-Trent, Staffordshire.

PRICE REDUCTION

THE makers of the **Unatap** spray tap announce a reduction in its price. New cost of this hot and cold water mixing tap, which was developed a year ago in collaboration with the Building Research Station to halve water consumption at hand wash basins, is £6 8s. as opposed to £6 15s.

Walker, Crosweller & Co. Ltd., Whaddon Works, Cheltenham.

Safety

P.V.C. REINFORCED

THE **Weatherjac** is a recent addition to the Jeltek range of protective clothing. Outstanding feature of this new donkey jacket is the panel of waterproof P.V.C.-coated fabric built into the back, across the shoulders and down the tops of the arms. Apart from reinforcing the jacket where it receives most wear, the P.V.C. panel, say the makers, offers greater protection against

the weather than the ordinary waterproof saddle lining. Available in a variety of colours, useful for identification purposes, this trimming is an ideal surface for the Jeltek indelible marking process, as illustrated.

The Weatherjac is made from 30 oz. Blue Melton material, liberally cut and tailored by craftsmen. It has two outside patch pockets, storm collar and saddle lining, and is available in sizes from 36 in. to 46 in.

J. E. Lesser & Sons Ltd., Green Lane, Hounslow, Middlesex.

COMFORT GOGGLES

THE Pulsafe "Eyecare" plastic goggle gives wide-angle vision and is ventilated to suit the job. Ventilation is provided by generous perforations, as illustrated, or by baffille port ventilators with gauze screens to prevent dust

entering. It can also be supplied without ventilation. Moulded from softest P.V.C., the frame is designed to fit snugly and to be worn comfortably over prescription spectacles. The style shown is fitted with .060-in. acetate lens, offering extra impact resistance, but lenses of .040 in. can be supplied for lighter duty.

Safety Products Ltd., Holmethorpe Avenue, Redhill, Surrey.

ANTI-GLASS CREAM

WORKERS who handle fibreglass, and who find that gloves afford protection but are clumsy in use, will be interested in a new barrier cream which is claimed to be an effective shield against the minute spicules of this material. Rozalex No. 11 was originally introduced as a protection for workers handling paints, varnishes and heavy oils, but it has been discovered that if it is applied before starting work, it

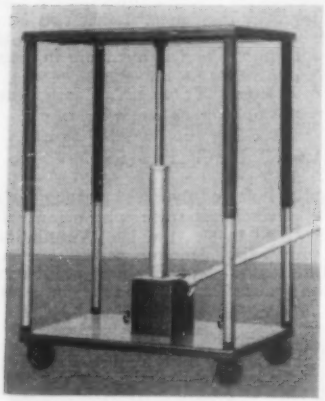
dispenses with the after-effects of inflammation and discomfort. It is supplied in 1, 7, 14 and 50 lb. tins.

Rozalex Ltd., 10 Norfolk Street, Manchester, 2.

Handling

EASY LIFTING

THIS hand-operated, hydraulic elevating trolley is said to be robust, easily pushed around and light to handle. The standard model has a top area of 33 in. by 21 in. It stands 29 in. high, and in its fully raised position reaches a height of 48 in. A variety of non-standard tops can also be supplied



—stainless steel or Warerite for the food and pharmaceutical industries, jig-type tops for inter-production movement or even roller conveyor tops for use with permanent conveyor systems, etc.

It will lift loads of up to 8 cwt. to full height in 35 seconds, and the handle can be pumped with one finger. Lowering is effected by giving the handle a half turn anti-clockwise. Clips are provided for housing the handle when not in use, and the trolley is fitted with two fixed and two swivel wheels. Standard finish is deep bronze green; other colours can be supplied if required.

Farrow & Jackson Ltd., 41-42 Prescot Street, London, E.1.

FOR SWARF REMOVAL

THE **Talisman** swarf truck, which is claimed to be unbreakable, is made for heavy work in the rapid removal of swarf from the workroom. Capacity is 11 cu. ft. and the design allows easy tipping. The all-welded steel plate body is 2 ft. 6 in. deep, with base area of 2 ft. by 2 ft., increasing to 2 ft. 6 in. at the top.

It rolls smoothly on 10-in. diameter main wheels with 6-in. castors for sharp turning. Steel wheels are recommended but replaceable rubber tyres may be

specified as an extra. Price: £15 16s. (steel wheels); £17 4s. (rubber wheels).

Williams & Dickinson (London) Ltd., 27 John Adam Street, London, W.C.2.

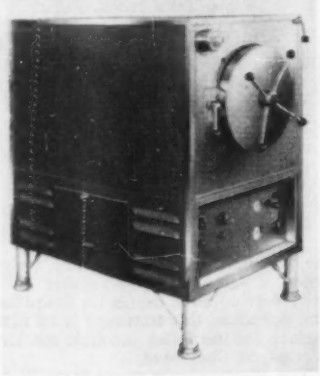
Canteen

LABOUR-SAVING OVEN

SAVINGS in fuel costs, space, cooking fat, operator's wages, shrinkage of meat cooked, even savings in seasoning are claimed for the **Ovenator,** a piece of West German catering equipment (by the Küppersbusch company) for which a British firm has recently acquired sole distribution rights.

Basing their figures upon experience gained in a Swedish Army kitchen cooking for 600 men daily, the agents say that at least one trained cook would become redundant in preparing food for that number. Standard equipment would normally be two frying tables and two roasting ovens, while the same capacity is found in one *Ovenator.* Since this saves space (approximately 30 per cent), the saving in ventilation costs is proportionate.

Deep-frozen food can be placed straight in the Ovenator without wasting time in thawing. 40 lb. of beef, for example, in 6-lb. joints at −24 deg. C. can be cooked and ready for carving



in 100 minutes. Moreover, it is claimed that the flavour of vegetables, poultry and fish, and particularly the vitamins B and C, are carefully preserved during cooking.

The Ovenator is electrically powered and has a maximum loading of 25 kW. Fuel consumption, when used continuously at its highest temperature, is 5.5 kW. per hour. Heating-up time from cold is about 25 minutes.

Kitchen Machines Ltd., St. Andrew's House, 32-34 Holborn Viaduct, London, E.C.1. This firm has now become an associate company of **Staff Caterers Ltd.,** canteen caterers. They have extended their joint operations and both head offices are now at the new address given above.

DO-IT-YOURSELF GUIDE

FOR the personnel officer or canteen manager who wants to save money on repairs to those canvas stacking seats he bought some years back, a do-it-yourself leaflet is now available. Its simple, illustrated directions will show any member of the firm's maintenance staff exactly how to replace the canvas seats and backs of tubular nesting chairs with the minimum of time and trouble.

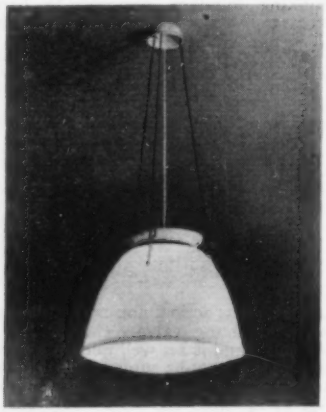
Pel Limited, Oldbury, Birmingham.

Heating & Lighting

SPECIAL FITTINGS

TWO new lighting fittings designed for special application are available from G.E.C.:—

The company's non-corrodible fittings are supplied in two sizes. The first, F.64532 (illustrated) is 12½ in. high by



14 in. wide and houses a 150/200w lamp, while the F.64533 is larger, 17 in. by 18½ in., and houses a 300/200w lamp. (Prices: £9 and £13 6s., respectively.) They have been designed for use in food factories and other installations

where corrosive vapours are present. They are largely of plastic construction, have no external metalwork and incorporate an entirely new method of suspension.

The reflector of each fitting is formed in 068 opal Perspex and is sealed into a front cover of clear "pin-spot" Perspex, thus ensuring adequate upward illumination while maximum light is directed downwards.

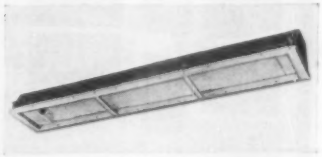
Intended for both surface and partially recessed mounting, the prismatic bulkhead fitting illustrated is

constructed of rust-proofed, stove enamelled 18 S.W.G. pressed steel. Fitted with either clear or obscured prismatic glass, sealed to the body by means of a Neoprene gasket, the unit houses one 100w lamp. The porcelain B.C. lampholder is mounted on a white enamelled internal reflector, detachable to allow easy access for wiring. Glass braided sleeving is included to afford protection for "through" cables in conjunction with the reflector, and two earthing terminals are provided, one on the body and the other on the internal reflector. Price is £1 9s. 8d.

General Electric Co. Ltd., Magnet House, Kingsway, London, W.C.2.

NEW LIGHTING RANGE

THE dust-proof light fitting illustrated, the SGL 6080, is designed for a single 5-ft. 80w single lamp, and is finished externally in grey stove-enamel with a white inside. Selling at £14 19s. 4d., tax free, it is one of eight new fittings suitable for industrial and office use. This new "Gold Label" range of fittings includes several tungsten floodlight fittings — a weather-proof dispersive floodlight, a robust projector for narrow beam floodlighting and a fitting suitable for use with 140w sodium lamps. A choice of industrial reflector fittings is also available, while the range of associated control apparatus covers capacitors and ballasts



for fluorescent, mercury and sodium discharge lamps.

Further particulars and prices, as well as advice on illumination problems from the newly-created free lighting advisory service, can be had from the firm's head office.

Stella Lamp Co. Ltd., 158-160 Shaftesbury Avenue, London, W.C.2.

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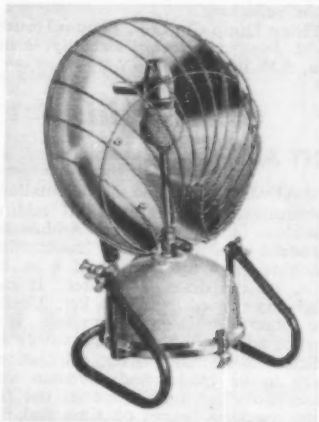
TWELVE hours' radiant warmth, the makers claim, on only 1½ pints of



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ordinary paraffin, can be yours with the new radiant heater, Model R.H. 57. Suitable for the office or the smaller working space, it is completely portable and is fitted with an easy-grip carrying handle. Heat direction can be altered at will by means of its metallic gold-lacquered adjustable stand. Other features are a removable chromium-plated fireguard (which conforms with the latest safety regulations), a cream enamelled solid brass container with lacquered brass rim and a highly polished speculum plated, mirror finish 12-in. reflector.

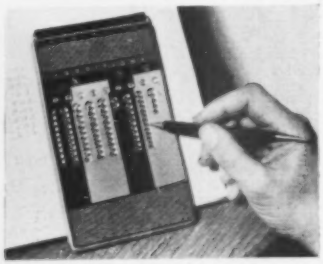
Tilley Lamp Co. Ltd., Tilamp House, 70-72 Jermyn Street, Piccadilly, London, S.W.1.

Office Aids

TINY ADDER

CLAIMED to be one of the smallest, neatest and lowest-priced adding machines in the world, the **Addmaster Standard** adding and subtracting machine takes up a space of 8 in. by 5 in. on the desk or counter. It can easily be carried in the pocket. Useful for general bookkeeping purposes, it is particularly handy in small works or offices where many quick calculations have to be made, and foremen and supervisors can find a special use for it in checking figures on time and job cards.

The machine is worked by a stylus; the point is inserted into one of the holes in the face, representing numbers, and pushed up or down, according to whether the hole shows red or white. The result is shown on nine dials.



Addition is done on the front of the machine only, the reverse side being used for subtraction, and, since both are shown in the same total, they can be done consecutively. The machine is cleared by pulling a handle at the top and pushing it back again. It is smooth and silent in operation, and any mistake in manipulation is automatically shown in one of the dials, and can be rectified without upsetting the calculation.

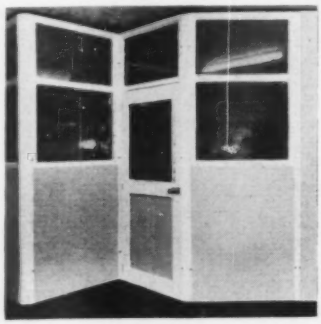
Our photograph shows the machine with the light green metal stand (which folds over the machine to form a protective carrying case) removed so that it can be laid flat on the page of the ledger from which the operator is working. This reduces the over-all size to 7 in. by 4½ in., and provides an extra check against errors: as calculation proceeds the machine is moved down the page, one line at a time.

Priced at £7 the standard model is for sterling calculations (capacity — £99,999 19s. 11¾d.), though models for other currencies and for decimals can be supplied at the same price.

K. Bisset & Co. Ltd., 145 Grand Buildings, Trafalgar Square, London, W.C.2.

ADJUSTABLE PARTITIONS

GRANGEWOOD partitions, a new form of partitioning shown at the recent Building Trades Exhibition, are designed for factory or office use. The wooden sections are claimed to be economical and to be adjustable to any height from 7 to 11 ft. in a matter of



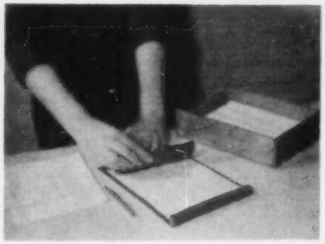
minutes. They glide simply into position and lock into place with only two fixings needed. At ceiling height one single-screwed bracket is used, while at the base, each section slides over a "top hat" rail screwed to the floor. The makers say that they successfully overcome any variation in ceiling height or length, incutting beams and projecting masonry. Their erection requires only semi-skilled labour.

Austins of East Ham Ltd., 2 Abbots Road, East Ham, London, E.6.

SIMPLE DUPLICATING

NO ink, stencils or liquid of any kind are needed with the **Merlin Cub** dry-process duplicator. It is not mechanical and no operating skill is required to reproduce typed or written information. Materials are contained in a smart wooden box (roughtly 10 in. by 8 in. by 2½ in. high) and the lid of the box slides off to form a base plate on which the duplicating is done.

The Merlin Cub makes use of a master copy set comprising three papers — white master copy paper, interleaving tissue and coated purple base sheet.



The interleaving tissue is removed, the master sheet typed, written or drawn on to give an impression on the reverse side (a small ball pen is provided for writing), and the coated base sheet is then discarded. A sheet of sensitised copy paper is placed in contact with the master, held firm by a ridge on the base plate. Next, a squeegee is passed firmly over the paper, which results in a clear impression on the copy paper. Fifty or more copies are easily obtained in this way. Master copy sets and copy paper measure 8 in. by 6½ in. Price is £3 12s.

Ellams Duplicator Co. Ltd., 5 Dean Street, London, W.1.

Good Housekeeping

NEW CLEANING TECHNIQUE

NO smell, no mess, no water, no inconvenience, no need to vacate the office or factory while cleaning is taking place — these are the advantages claimed for a process which has recently been employed to clean the walls of several factories, industrial canteens and churches. The process uses a special plastic which is hermetically sealed before use and which has great dirt-absorption properties.

This method is particularly useful when dealing with non-washable distempered walls. These can be quickly cleaned, and any deep-seated stains or grease marks removed by another process. Interior stonework which absorbs water is more simply and efficiently cleaned in this way, and the treatment causes no damage to paintwork or other surfaces.

The material is not for sale to individual firms; it is reserved solely for use by a cleaning service to industry, known as Clean Walls Ltd. This firm has its headquarters in London and a branch in Birmingham, and operates within a 30-mile radius of both cities. In special cases jobs will be undertaken in other areas.

The firm has also devised a process for cleaning acoustic ceilings and tiles which require special treatment to maintain their sound-deadening properties.

Clean Walls Ltd., 49 Paddington Street, London, W.1.

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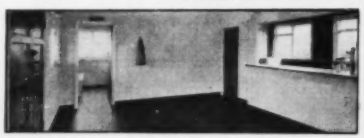

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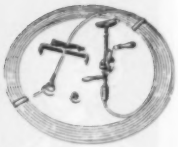

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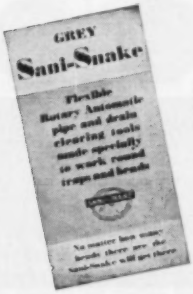

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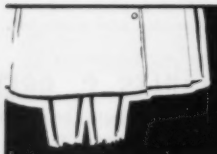

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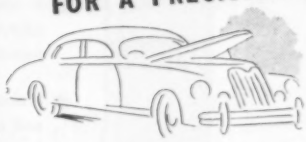

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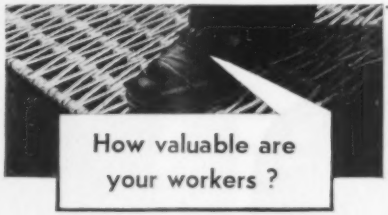

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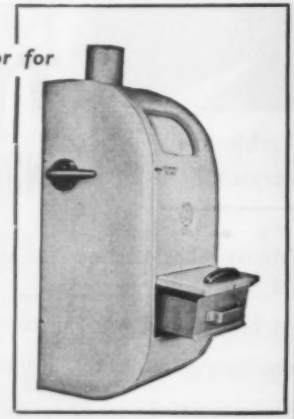

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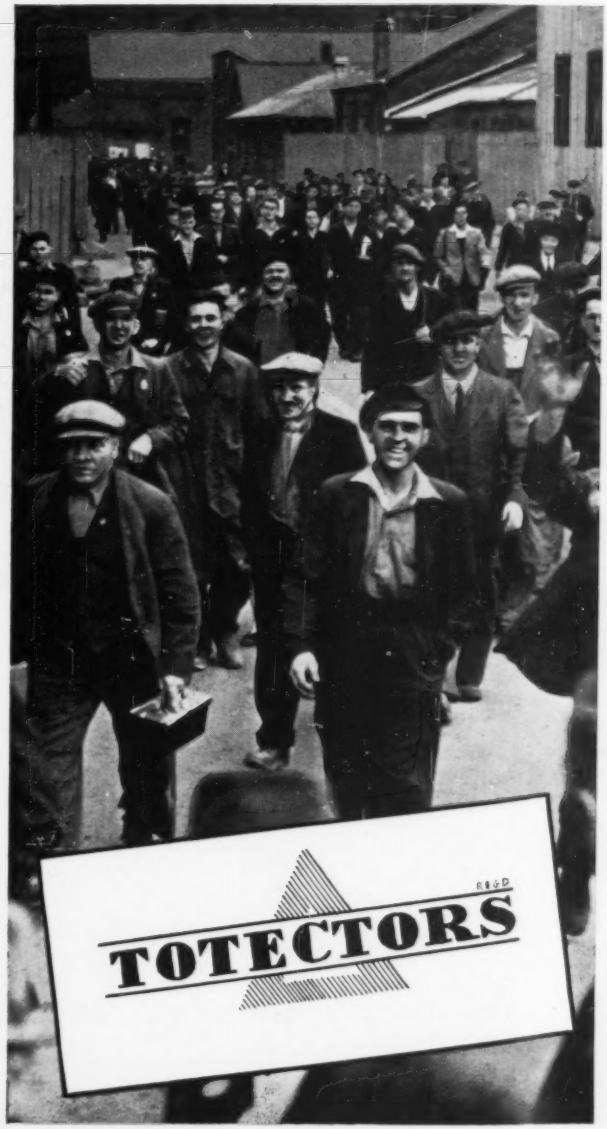
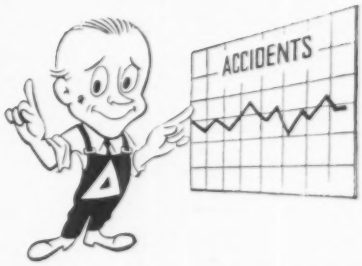
Advertisement, editorial and sales offices: Mercury House, 109-119 Waterloo Road, London, S.E.1 (Waterloo 3388).

Who foots the bill for foot injuries in the factory?



ASKS MASTER TOTECTOR



The answer is, of course, the employer. For every casualty laid up with foot injury means a loss in man hours and output. Avoid this liability by instituting the use of *TOTECTORS* Safety boots and shoes. Tough yet comfortable in wear, they have a *concealed steel toecap capable of withstanding a dead weight of 3 tons.* Safety and Welfare Officers are invited to apply for full details.

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